

INPUT

STRATEGIC MARKET PERSPECTIVE

IT Customer Services Competitive Analysis Europe 1995

Customer Services Programme — Europe

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IT Customer Services Competitive Analysis Europe 1995

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**Customer Services Programme —
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Abstract

The changes brought about by the open systems phenomenon are having enormous consequences for traditional IT customer services organisations. The high-cost, labour-intensive, product-focused model of service delivery is now firmly a thing of the past. Low-cost, customisable, business-focused service solutions are the shape of things to come.

IT customer services organisations are having to re-address the basic tenets of their business. They are questioning their position in today's marketplace, making essential adjustments, and doing all that they can to optimise their service delivery processes.

This report is a complementary study to *IT Customer Services Trends and Forecast, Europe 1995-2000*, issued earlier this year. The report examines the supply side of the market by:

- Describing the major challenges facing customer services vendors in the late 1990s
- Describing how the principal players in the market for IT customer services (equipment vendors, independent maintenance organisations and the distribution channel) are positioning themselves to meet present market demands
- Providing estimates of the revenues of the leading customer services vendors in each of 16 individual European country markets, plus Eastern Europe. For each country, top 10 rankings are given, along with (for the major territories) an analysis of the total market by type of vendor.



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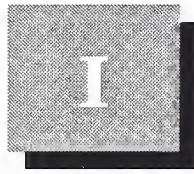
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Introduction

A

Objectives and Scope

This study examines the supply side of the market for IT customer services, providing insights into the strategy and positioning of leading European customer services vendors, plus estimates of vendor revenues segmented by service sector and country market.

This is a complementary study to the report *IT Customer Services Trends and Forecast, Europe 1995-2000*, issued earlier this year. Both reports provide qualitative analysis of the European market as a whole, plus detailed quantitative analysis for each of 16 individual countries (plus Central and Eastern Europe grouped as a single territory).

Western European country markets included in this report are:

Austria	France	Italy	Spain
Belgium	Germany	Netherlands	Sweden
Denmark	Greece	Norway	Switzerland
Finland	Ireland	Portugal	UK

Countries aggregated into the Central and Eastern European market are:

Albania	Estonia	Poland	Slovenia
Bulgaria	Hungary	Romania	Ukraine
Croatia	Latvia	Russian Federation	Serbia*
Czech Republic	Lithuania	Slovakia	Other CIS countries

(* and the other former Yugoslavian republics)

B

Methodology

INPUT's established methodology is based on extensive vendor revenue collection and analysis techniques, plus user research conducted in the leading country markets of Europe.

INPUT's analysis is supplemented by information from various other sources including vendor annual reports, company press releases and specialised data published by the computer industry trade press.

C

Report Structure

The remaining chapters of this report are as follows:

- Chapter II is an executive overview which provides a summary of the key findings of the study
- Chapter III describes the major challenges facing customer services vendors in the late 1990s
- Chapter IV describes how the principal players in the market for IT customer services (equipment vendors, independent maintenance organisations and the distribution channel) are positioning themselves to meet present market demands
- Chapter V contains estimates of the revenues of the leading customer services vendors in each of 16 individual European country markets, plus Eastern Europe. For each territory, top 10 rankings are given, along with an analysis of the total market by type of vendor

- Chapter VI contains a detailed analysis of the revenues of the top 20 customer services vendors in Europe, broken down by country and service sector
- Appendix A defines INPUT's view of the customer services market, and provides detailed definitions of service sectors and delivery modes
- Appendix B provides the exchange rates used to convert vendor revenues in local currencies to US Dollars.

D

Related INPUT Reports

Other INPUT reports which address topics related to the subjects discussed here include the following:

IT Customer Services Market Trends and Forecast — Europe 1995-2000

Delivering Customer Service Through The VAR Channel — Europe 1995

Supporting Client / Server Systems — Europe 1994

Desktop Network Support Opportunities — Europe 1994-1999

Systems Software Support Contracts in an Open Environment — Europe 1993

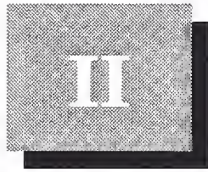
Equipment Service Contracts in an Open Environment — Europe 1993

Environmental Services Opportunities in Europe, 1993-1998

Outsourcing Repair Services — Europe 1993-1998

Structuring a Vendor Organisation for Professional Services — Europe 1993

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Executive Overview

A

Independent Software and Services Firms Advance As Customer Services Vendors Reorganise

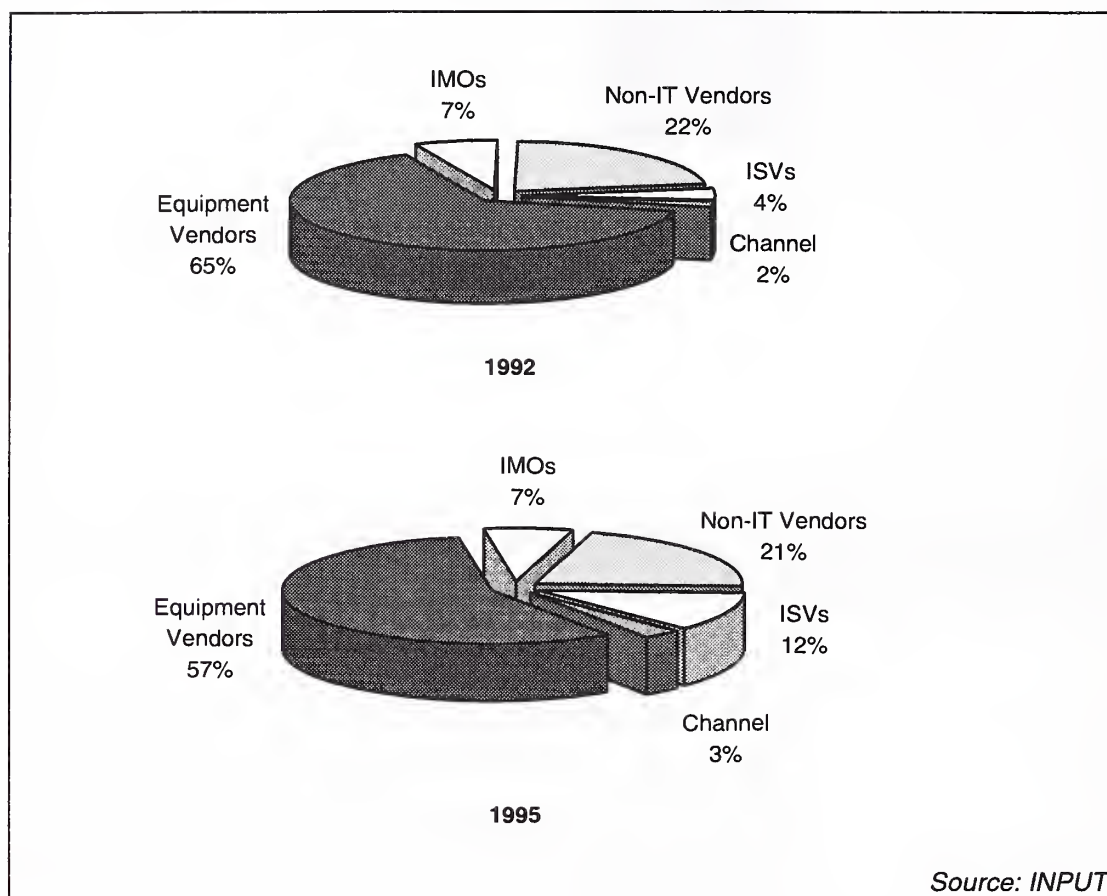
The changes brought about by the open systems phenomenon are having enormous consequences for traditional IT customer services organisations. Vendors are having to re-address the basic tenets of their business and re-engineer their business processes to ensure that the fundamental principles of delivering value, containing cost and understanding the customer continue to be addressed in today's complex multivendor service environments.

The fact that many customer services organisations are in a state of transition, combined with the declining value of equipment maintenance services, has enabled independent software and services firms (ISVs) such as EDS, Cap Gemini and Sema to take a greater share of the customer services market.

In 1992, the ISVs' share of the customer services market was less than 4%. This has grown to almost 12% in 1995. See Exhibit II-1.

Exhibit II-1

European Customer Services Expenditure by Vendor Type, 1992 vs 1995



Overall, the IT vendors are beginning to make inroads into the non-IT vendors' market share. Building and construction firms offering a variety of environmental services such as cabling and network installation have lost out to specialist IT companies in the last year.

However, within the IT community, independent software and services firms are continuing to make inroads into the share of the traditional customer services players (equipment manufacturers, independent maintainers and the channel). The increase in the ISVs' market share reflects a shift in demand towards value-added services and to those suppliers who are optimised to deliver these services.

However, customer services vendors can fend off a long-term challenge from the independent software and service firms by:

- Optimising the service delivery model to deliver higher value, low cost services
- Achieving a closer understanding of their customers' needs.

The remainder of this chapter looks at these issues in more detail, and contains summary assessments of the strategies being adopted by the leading customer services vendors in Europe today.

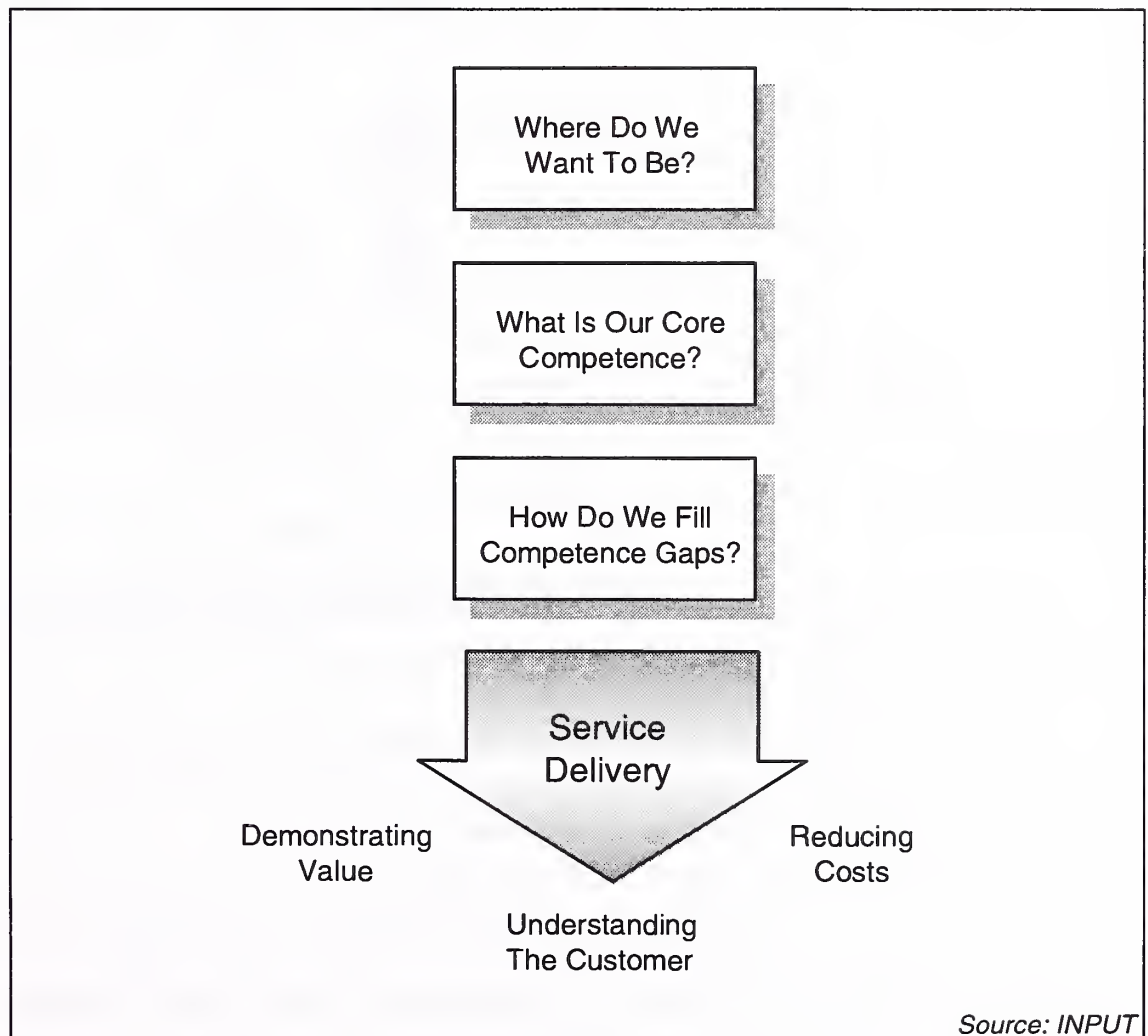
B

Optimising Customer Services Delivery in the Late 1990s

The high-cost, labour-intensive, product-focused model of service delivery is now firmly a thing of the past. In the late 1990s, users are demanding low-cost, customisable, business-focused service solutions. For this reason, customer services organisations must engage in some fundamental rethinking, as illustrated by Exhibit II-2.

Exhibit II-2

Optimising the Services Model in the Late 1990s



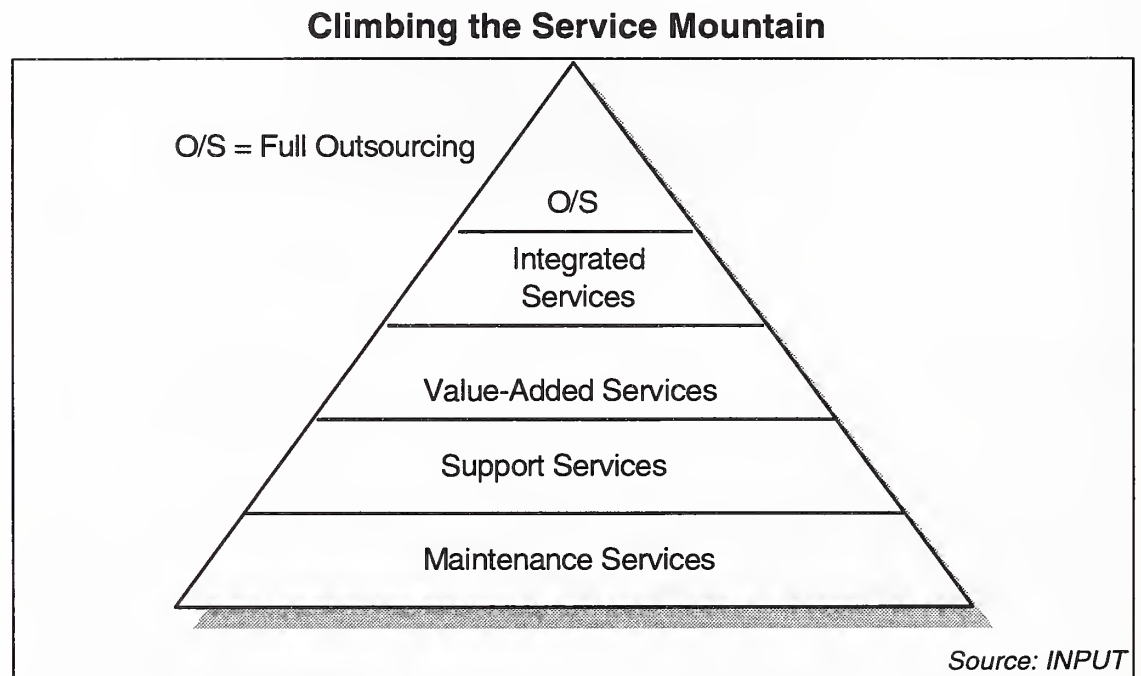
The aim of this optimisation process is to ensure that a balance is achieved between the opposing forces of delivering value and containing cost.

1. Delivering Higher Value Services

Customer service providers have witnessed the erosion of their core business; the market for equipment services has become a low price, low margin business. Hence, customer service providers face the inevitable challenge of moving into higher value service markets.

In effect, customer services organisations are having to climb the *service mountain* shown in Exhibit II-3.

Exhibit II-3



To succeed in their climb, these organisations must:

- Focus on client/server computing
- Adopt a strategic approach to multivendor service provision
- Develop a focused service partnership strategy.

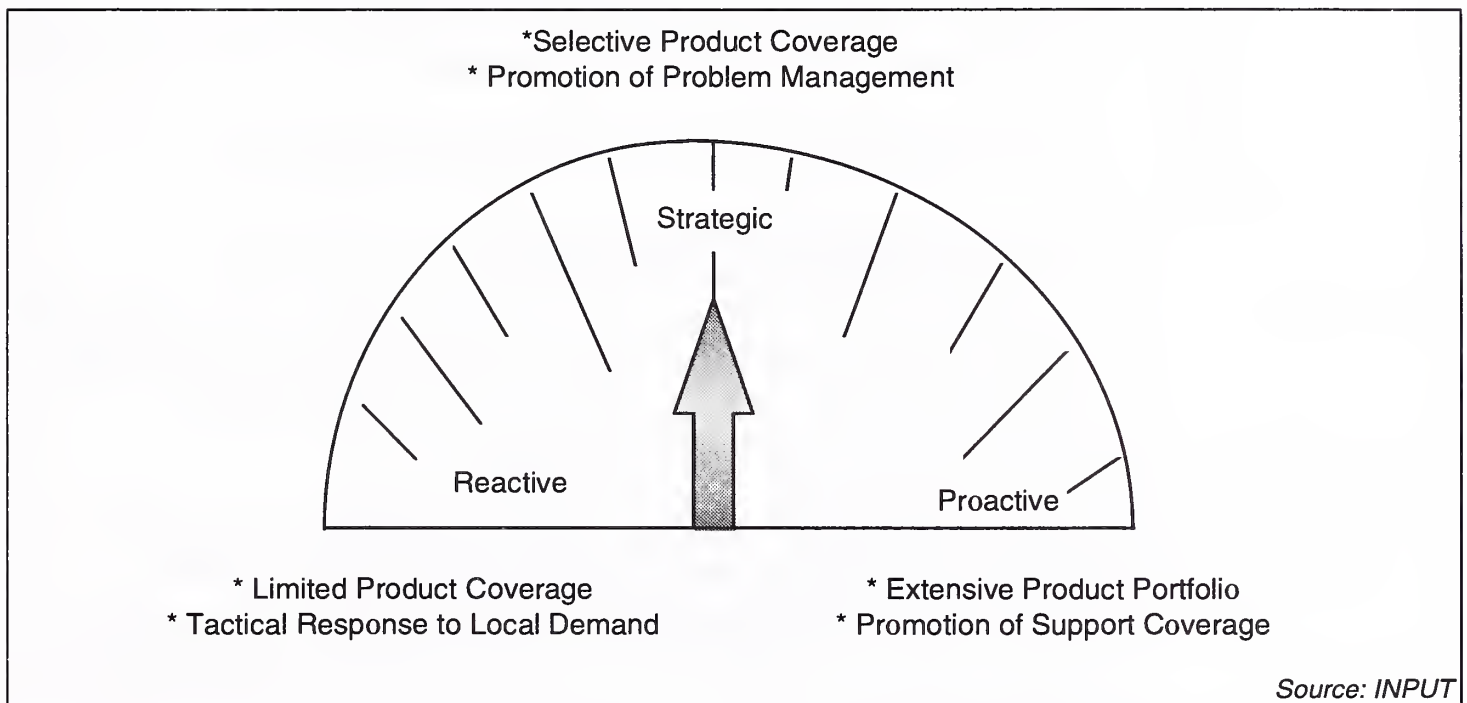
Unless service providers intend to focus on niche proprietary business such as repair of specific legacy equipment, it is clear that client/server computing will provide the best service opportunities for years to come.

By the year 2000, the market will consist of predominantly multivendor services delivered onto client/server platforms.

However, simple multivendor product services are unlikely to meet the needs of users in the next millennium. Service organisations may adopt various approaches to multivendor services, but the best approach will be *strategic* rather than product-centric. See Exhibit II-4.

Exhibit II-4

Adopting A Strategic Approach to Multivendor Service



The strategic approach to multivendor service offers genuine problem ownership and management on behalf of the client. This approach treats each client as a unique case, but offers the same guarantee of problem resolution regardless of the cause, or source (equipment, software, network) of those problems. However, no service provider will succeed in building strategic multivendor service capabilities single-handedly. The key to success will lie in suppliers' ability to build *strategic alliances*.

Organisations are looking for fewer supplier relationships and many are demanding full service capability from a single source. However, to be able to provide the sort of all-encompassing service solutions demanded by customers, service providers are inevitably having to work together. Today, manufacturers and independent service organisations are both competing and partnering. Both groups are also partnering with the leading independent software vendors.

Today's successful service organisation must have a strong sense of its own core capabilities, backed up by robust partnerships with other organisations who provide essential complementary services.

2. Reducing the Cost of Service Delivery

The drive to deliver value is opposed by an equally important force: the need to contain costs. One of the most important factors in controlling costs is the effective utilisation of technology.

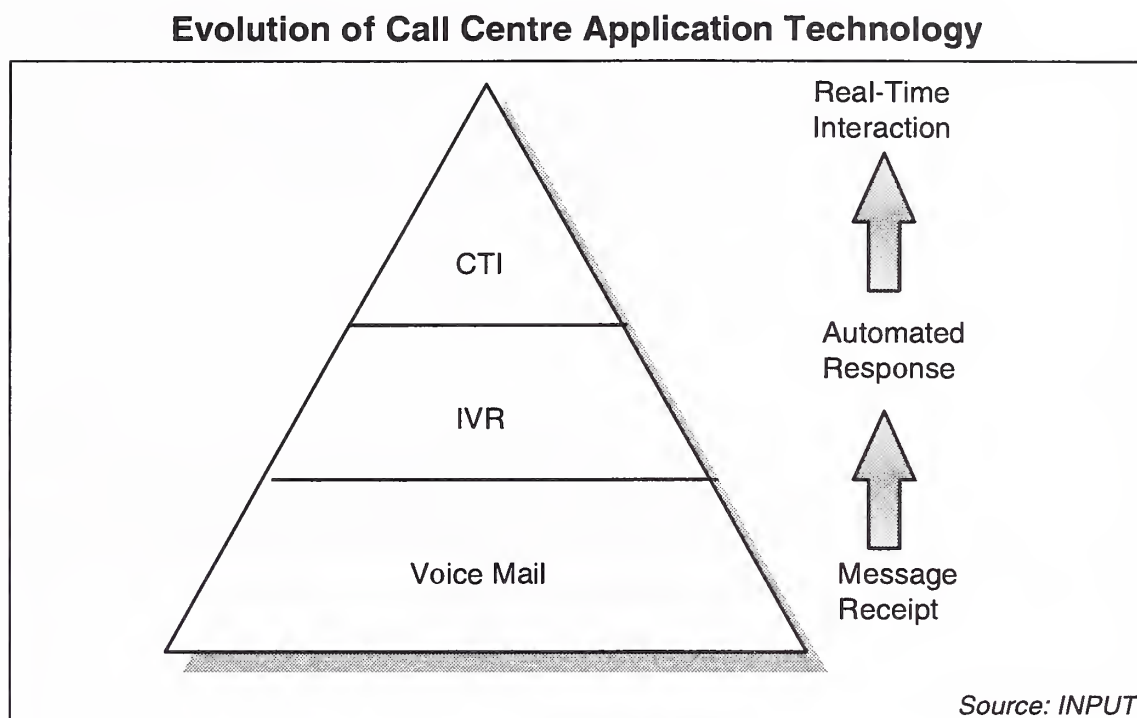
Two technology trends in particular look set to define the future of service delivery processes, whilst delivering lower costs:

- The emergence of on-line service delivery mechanisms
- The development of advanced call handling technology.

On-line forms of service delivery are today commonplace and, of them all, the Internet perhaps holds the greatest potential. Service organisations not offering some form of *on-line* capability are already finding themselves at a competitive disadvantage.

Advanced call-handling capability is also increasingly vital to today's suppliers. In this respect, the technology which holds the greatest potential for reducing service delivery costs whilst improving quality is Computer Telephony Integration (CTI). CTI represents a significant step forward in terms of sophistication from previous, more limited systems (see Exhibit II-5).

Exhibit II-5



By delivering greatly improved call handling, and ease of integration with systems such as Automated Call Distribution (ACD) and Interactive Voice Response (IVR), the benefits of CTI are strongly applicable to the call centre environment, though all levels of service operation will benefit, from helpdesks to field engineers.

Strategic deployment of service management technology will drive through the cost savings that are absolutely vital to today's IT service organisation, and will also lay the foundation for delivering higher value customer service in future.

C

The Changing Competitive Landscape of IT Customer Services

IT customer service was, for a long time, the preserve of the equipment manufacturers. Then, when the independent maintenance organisations began to emerge, the manufacturers were forced to acknowledge competition and participate in a fierce price war.

The long-term effect of that war has been the necessity for manufacturers to restructure, reskill and adopt independent (multivendor) services themselves.

Vendors like Digital, Olivetti and ICL have already made significant progress in their transition from being suppliers of proprietary remedial services, to providers of multivendor service solutions. Others are far less advanced. However, organisational, financial and cultural changes are the order of the day for *all* equipment manufacturers today.

Exhibit II-6 lists the top 5 equipment vendors in Europe in 1994, ranked by total customer services revenue.

Exhibit II-6

Leading Equipment Vendors, Europe 1994

	Vendor	1994 Customer Services Revenues (\$ Millions)	Market Share (%)
1	IBM	3230	11.9
2	Digital	1740	6.4
3	Siemens-Nixdorf	1640	6.0
4	Hewlett-Packard	960	3.5
5	Bull	900	3.3

Source: INPUT

The independent maintenance organisations (IMOs) are finding current market conditions very difficult indeed, for two reasons:

- The steady decline in the market for traditional equipment maintenance. The market for contracted maintenance services across all computer platforms is forecast to decline by 4% CAGR over the next five years
- The IMO's major selling proposition, low cost, no longer has the dominant appeal it once did. Buyers of IT services are looking for *value-added*, not just low cost, services.

The fact that users are increasingly demanding integrated service solutions, of which maintenance is just one component, means that the IMOs are no longer a natural first choice as a service partner.

The dilemma facing the IMOs is thus how to survive in such fiercely competitive conditions. Many smaller IMOs will have little choice but to specialise and narrow the focus of their activities. The preferred strategy

of the larger independents will be to extend their service capability, and to build strategic partnerships wherever possible.

The merger between ICL and Sorbus earlier this year sent out a strong message to the industry, perhaps signaling the start of a major market consolidation phase. It will be interesting to observe how much longer other leading European IMOs can remain independent.

Exhibit II-7 lists the top 5 IMOs in Europe in 1994, ranked by total customer services revenue.

Exhibit II-7

Leading IMOs, Europe 1994

	Vendor	1994 Customer Services Revenues (\$ Millions)	Market Share (%)
1	Getronics	350	1.3
2	ICG (Consortium)	330	1.2
3	Granada	230	0.8
4	Thomainfor	170	0.6
5	Comma (ND)	120	0.4

Source: INPUT

The channel players, the dealers and distributors, have not been slow to realise the potential of offering services to their customer base. Many have responded to market demand by developing their own service capabilities, and increasingly consider service to be a vital part of their business. Computacenter in the UK is a typical example of a PC dealer which has started to emerge as a key player in the desktop services market. A separate business unit targeting purely service business is already estimated to have desktop services revenues of approximately \$15 million.

At the same time as established players are striving to meet the changing demands of the customer services market, new market entrants are emerging. These new players are able to apply the benefits of hi-tech service capability and low overhead operations at various points in the service supply chain.

In particular, the area of logistics has been the focus of much recent activity. Carriers such as UPS and DHL have been busy carving a niche by handling equipment vendors' parts distribution needs. Vendors, realising the benefits of outsourcing the logistics side of their business, are using the carriers' mail warehousing and distribution facilities in increasing numbers. Some fourth party maintenance companies are also now offering logistics services to vendors, including warehousing and distribution facilities.

Arguably, it is the independent services companies, such as the outsourcing specialists, who are giving the traditional customer services players the greatest cause for concern. Product vendors are increasingly finding themselves bidding against companies such as EDS, CGS, Hoskyns and Sema Group.

In being able to leverage significant industry experience, and boast track records in delivering tangible business benefits, such organisations are currently fuelling the competitive conditions of today's IT customer services market.

D**Leading Customer Services Vendors At A Glance**

Exhibit II-8 lists the top 20 vendors in Europe, ranked by 1994 customer services revenue in millions of dollars.

Exhibits II-9 to II-12 list the top 10 vendors in France, Germany, UK and Italy respectively, with revenues in local currency.

Exhibit II-8

Top 20 Vendors, Customer Services — Europe 1994 (\$ Millions)

	Vendor	Customer Services Revenue (\$M)	Market Share (%)
1	IBM	3230	11.9
2	Digital	1775	6.5
3	Siemens-Nixdorf	1645	6.0
4	Hewlett-Packard	965	3.5
5	Bull	900	3.3
6=	Olivetti	860	3.2
6=	ICL	860	3.2
8	AT&T	780	2.9
9	Unisys	705	2.6
10	Getronics	355	1.3
11	ICG	330	1.2
12	Granada	235	0.9
13	Sun Microsystems	190	0.7
14	Amdahl	175	0.6
15	Thommainfor	170	0.6
16=	StorageTek	160	0.6
16=	Wang	160	0.6
18	Comparex	155	0.6
19	Memorex Telex	145	0.5
20	Comma (ND)	120	0.4
	Total Listed	13910	51
	Total Market	27210	100

Source: INPUT

Exhibit II-9

Top 10 Vendors, Customer Services — France 1994 (FF Millions)

	Vendor	Customer Services Revenue (FFM)	Market Share (%)
1	IBM	3065	11.7
2	Bull	2365	9.0
3	Digital	1265	4.8
4	HP	810	3.1
5	Thomainfor	710	2.7
6	AT&T	670	2.5
7	SNI	570	2.2
8	Olivetti	395	1.5
9	ICL	370	1.4
10	Unisys	450	1.7
	Total Listed	10670	40.6
	Total Market	26310	100

Source: INPUT

Exhibit II-10

Top 10 Vendors, Customer Services — Germany 1994 (DM Millions)

	Vendor	Customer Services Revenue (DMM)	Market Share (%)
1	SNI	1645	17.8
2	IBM	1260	13.6
3	Digital	525	5.7
4	HP	315	3.4
5=	Unisys	180	1.9
5=	AT&T	180	1.9
7	Comparex	155	1.7
8	Bull	140	1.5
9	Olivetti	80	0.9
10	Sun	78	0.8
	Total Listed	4560	49.2
	Total Market	9260	100

Source: INPUT

Exhibit II-11

Top 10 Vendors, Customer Services — UK 1994 (£ Millions)

	Vendor	Customer Services Revenue (£M)	Market Share (%)
1	ICL	300	9.7
2	Digital	290	9.3
3	IBM	260	8.5
4	HP	145	4.6
5	Unisys	95	3.1
6=	Granada	90	2.9
6=	AT&T	90	2.9
8	Bull	65	2.0
9	SNI	50	1.7
10	Olivetti	45	1.5
	Total Listed	1430	46.1
	Total Market	3100	100

Source: INPUT

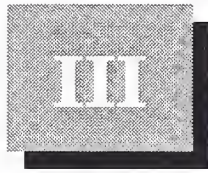
Exhibit II-12

Top 10 Vendors, Customer Services — Italy 1994 (Lira Billions)

	Vendor	Customer Services Revenue (Lira B)	Market Share (%)
1=	Olivetti	750	17.2
1=	IBM	750	17.2
3	Digital	200	4.5
4	Bull	165	3.8
5	HP	145	3.3
6	Unisys	100	2.3
7	SNI	90	2.1
8	AT&T	75	1.7
9=	StorageTek	25	0.6
9=	Sun	25	0.6
	Total Listed	2325	53.2
	Total Market	4370	100

Source: INPUT

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Major Challenges Facing Customer Services Vendors

A

Optimising the Model for Delivering IT Customer Services

The changes currently taking place in the market for IT customer services signal the emergence of a third wave in the development of the market, which INPUT has termed *business support services*. The forces driving this new wave are described in detail in the companion report *IT Customer Services Trends and Forecast, Europe 1995-2000*, issued earlier this year.

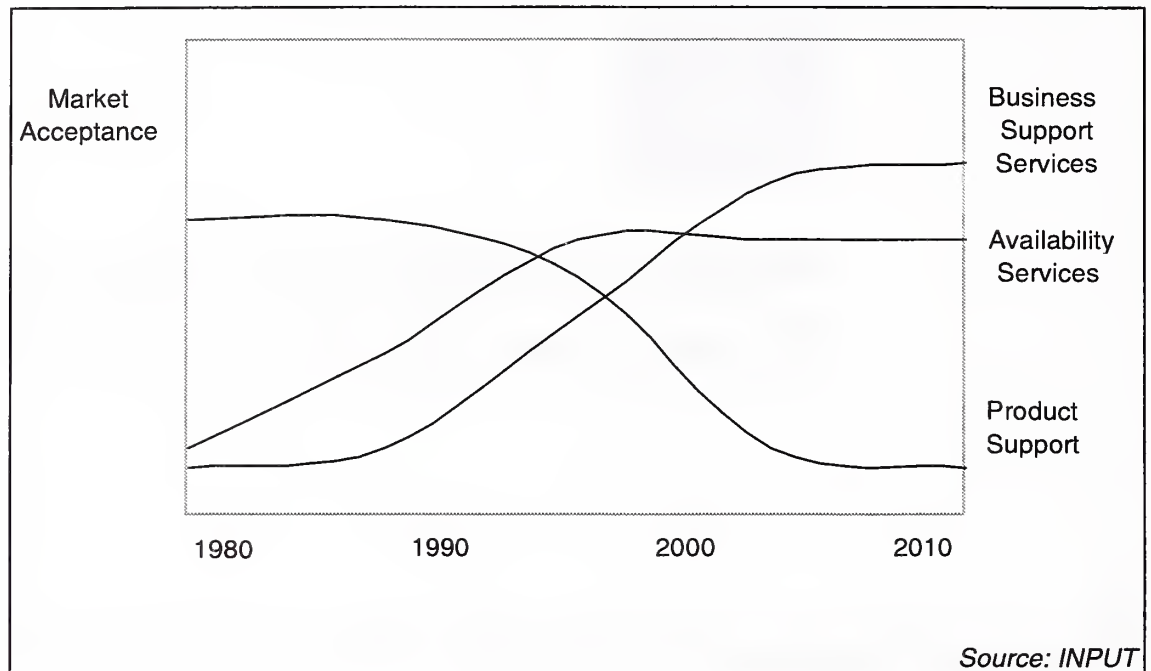
Exhibit III-1 depicts the development of the customer services market. It illustrates how, over the last decade, product break/fix has given way to the broader concept of systems availability, a more proactive service model aimed at optimising the usage of computer technology. This market wave is now set to plateau, as the concept of *business support services* emerges more strongly.

The demand side of the market is driving this change, with users increasingly seeking service solutions tailored to their own unique *multivendor* IT environments, and which reflect their specific *business* needs. These demand-side drivers will become irresistible as increasingly empowered users seek to make sense of their IT investments on their own terms.

The consequences for customer services organisations are considerable. The high-cost, labour-intensive, product-focused model of service delivery is now firmly a thing of the past. Low-cost, customisable, business-focused service solutions are the shape of things to come.

Exhibit III-1

Customer Services Transition to Business Support Services



Faced with the fiercely competitive conditions of the traditional equipment service business, most customer service organisations will have little choice but to re-engineer their business around a model of service delivery which is more appropriate to the market demands of the late 1990s.

Today's service organisation must not only be configured to provide multivendor *product* services, it must also be capable of delivering *business support* services by addressing the day to day needs of the people using the products. In this context, desktop services and network services, for example, can only be fully effective if they support and enable real business functions, not just the physical IT infrastructure.

Figure III-2 summarises the fundamental rethinking that must take place if vendors are to play a part in the new marketplace for IT customer services. The development of a new customer service business model consists of two basic stages:

- Repositioning the organisation
- Optimising the delivery process.

Exhibit III-2

Optimising the Customer Services Business Model

Repositioning the Organisation	Optimising Service Delivery
<ul style="list-style-type: none"> • Identify Market Position • Identify Core Competence • Fill Gaps in Competence (Reskilling, Alliances, Acquisitions, etc.) 	<ul style="list-style-type: none"> • Understanding the Customer's Needs • Reducing Service Delivery Costs • Demonstrating Service Value

Source: INPUT

The first stage addresses the *raison d'être* of the service organisation. The question “Where do we want to be?” may appear obvious, even superfluous. However, market positioning can be a hazardous business, with the temptation to be “all things to all people” a common failing. Very broad-based positioning is beyond the capabilities of even the largest players.

Hence, identification of core capabilities, an intelligent approach to partnership and joint ventures, and a focused channel strategy, are key to positioning the organisation.

The second stage, service delivery, addresses the *modus operandi* of the service organisation. Today, more than ever, efficient service delivery depends upon three fundamental principles:

- Delivering and demonstrating service value
- Reducing the cost of service delivery
- Understanding the customer (and the customer's customer).

B**Delivering Higher Value Services**

The equipment services market, traditionally the lifeblood of customer service organisations, has become a low price, low margin business. Service providers, having witnessed the erosion of their core business, face the inevitable challenge of moving into higher value service markets.

However, not all of today's players will survive the challenge. There are many small generalist maintenance companies, and some bigger ones

operating with insustainably high cost structures, who will not be capable of making the transition. Those who do survive will fall essentially into one of two groups:

- Niche players with a narrow focus on highly specialised, or legacy equipment
- Organisations offering a range of multivendor support and value-added services beyond maintenance.

To succeed in penetrating the higher-value services markets, vendors must:

- Focus on client/server computing
- Adopt a strategic approach to multivendor service provision
- Develop a focused service partnership strategy.

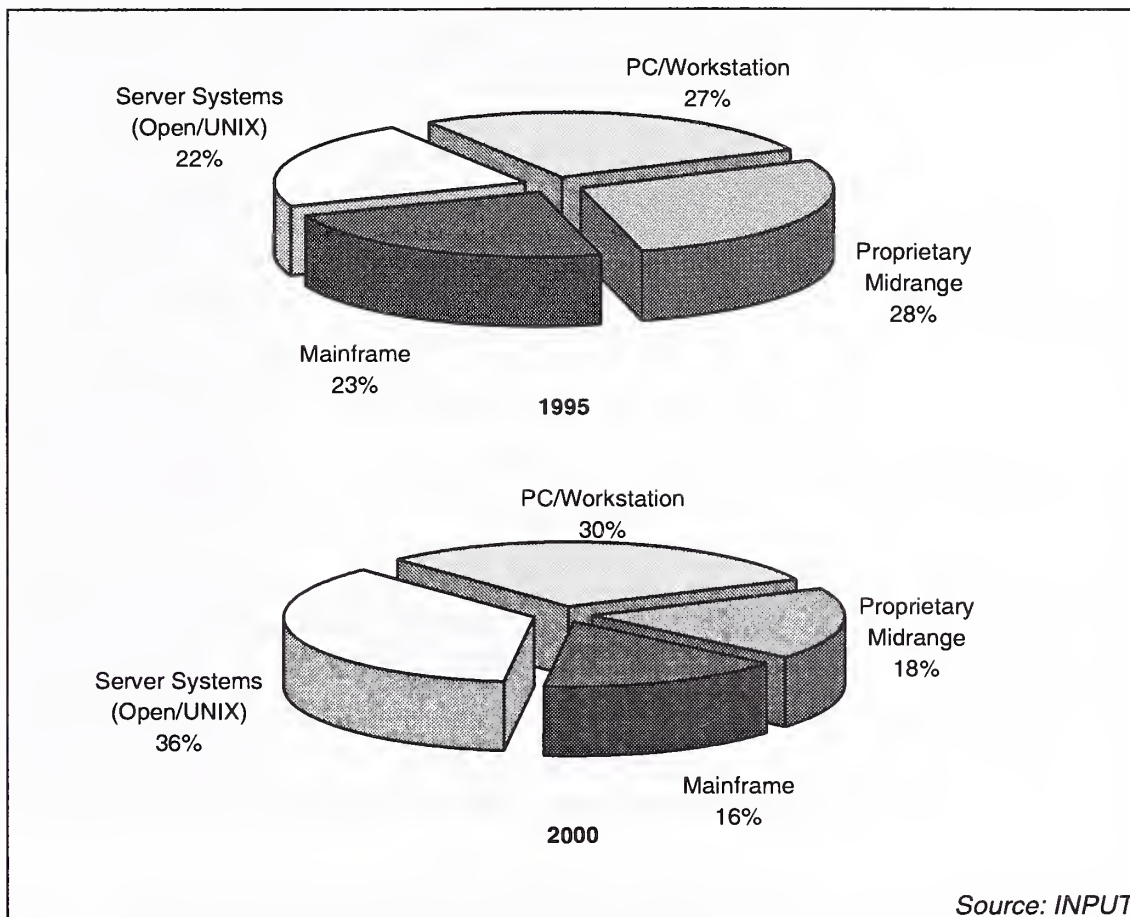
1. Client/Server Market Offers Best Opportunities

Currently, the distribution of service delivery is fairly evenly spread across the four principal computer platforms: mainframe, proprietary midrange, open (UNIX/NT) servers and PCs/workstations (see Exhibit III-3). However, both the proprietary midrange and mainframe platforms will show a sharp decline over the next few years.

By contrast, the open/UNIX server market will grow from just over 20% to 36% of the market by 2000. The open server and PC/workstation platforms combined (i.e. the client/server market) will be dominant, with just under 70% of the customer services market by 2000.

The message to service providers intending to move into the client/server market is clear: do not delay any longer.

Exhibit III-3

Customer Services Market Shift to Client/Server, 1995-2000**2. Adopting a Strategic Approach to Multivendor Service**

Client/server users are increasingly looking to their service providers to bring a sense of order to complex, multivendor computing environments.

However, simply offering support for multivendor client/server equipment will not be sufficient to bring success. As shown in Exhibit III-4, service organisations can take several approaches to user demand for multivendor service capability.

Exhibit III-4

Approaches to Multivendor Service

	Reactive	Strategic	Proactive
Basic Approach to Service Offer	Not part of normal service offer. Typically only in response to demand from existing clients	Marketed as problem management service in client/server environments	Maintenance-biased. Typically offers a comprehensive list of multivendor equipment maintained
Key Feature of Service	Specific to client	Guaranteed problem resolution regardless of source	Standard service level covering all equipment
Alliance Requirements	Specific, short-term partnerships, subcontractor arrangements	Robust back-to-back service arrangements with equipment and software vendors	Multiple arrangements with maintenance subcontractors; software certified engineers

Source: INPUT

The most basic approach is to respond to specific demands from existing customers on a case by case basis. For example, vendor A might agree to support equipment from vendors B and C if asked to do so by a major account customer.

At the other end of the spectrum, some vendors have reacted to the call for multivendor services by offering support for equipment and software products from *all* of the leading vendors. This product-centric approach to multivendor service is only likely to find success if the vendors concerned can deliver not only the breadth, but also depth, of support coverage which users require.

However, vendors who adopt a *strategic* approach to multivendor service will be most likely to succeed. This approach goes beyond the product-centric view, and offers genuine problem ownership and management on behalf of the client.

The strategic approach treats each client as a unique case, but offers the same guarantee of problem resolution regardless of the cause, or source (equipment, software, network) of those problems.

Vendors adopting this approach must be especially careful to qualify each client's unique multivendor environment before committing to a service arrangement. This includes ensuring that effective back-to-back service arrangements with the required equipment and software vendors are in place.

Another key aspect of providing a strategic service is the nature of the relationship between the provider and the client. INPUT's surveys of organisations which have recently adopted client/server technology reveal that most organisations consider the relationship to their service provider to be professional in nature.

Users indicate that they are unlikely to give over responsibility for complex multivendor environments to traditional "break/fix" suppliers.

This new attitude towards service providers is a natural response to the complex, and often chaotic, computing environments which have become commonplace today. Organisations are now looking for service partners to help them integrate isolated and diverse LAN systems, and to provide ongoing support for multiple applications across different networks incorporating multivendor hardware and operating systems.

3. Strategic Alliances Hold Key to Success

Most service providers who derive the majority of their revenues from straightforward maintenance of computer equipment will find it difficult to meet the broader demands of users in client/server environments.

However, no service provider will succeed in building these new service capabilities single-handedly. Hence, a key to success for those attempting to deliver higher value services is the building of *strategic alliances*.

INPUT's research suggests that user organisations are looking for fewer supplier relationships and that many are demanding full service capability from a single source. In a recent survey, a quarter of organisations making the transition to client/server technology switched from multiple to single-source supply.

However, to be able to provide the sort of all-encompassing service solutions demanded by customers, service providers are inevitably having to work together. Today, manufacturers and independent service organisations are both competing and partnering. Both groups are also partnering with the leading independent software vendors.

Today's successful service organisation must have a strong sense of its own core capabilities, backed up by robust partnerships with other organisations who provide essential complementary services.

C

Driving Down the Cost of Service Delivery

Delivering higher value service is just one side of an equation which must be kept in balance. The other side of the equation is the control of service delivery costs.

Key to cost control is the effective utilisation of technology. The customer's desire for better and faster service can only be met by implementing advanced forms of service management technology, which conveniently offers the potential for driving cost out of the service delivery process.

Certain forms of service delivery technology are already ubiquitous. For example, the use of bulletin boards amongst software service providers is now so widespread that they can virtually be considered indispensable. Similarly, most service managers use some form of call-logging, problem tracking and service-level monitoring software to streamline the delivery process.

Two technology trends in particular look set to define the future of service delivery processes, whilst delivering lower costs:

- The emergence of on-line service delivery mechanisms
- The development of advanced call handling technology.

1. The On-Line Imperative for IT Customer Services

A recent INPUT survey revealed that making better use of technology was the top priority of service managers planning to enhance their operational capabilities. Some of the plans mentioned by respondents included:

- Extending helpdesk management capability
- Improved use of telephony, including call switching at times of call overloads

- Adopting CD-ROM for distribution of known problems and problem resolutions
- Implementing video and desktop conferencing
- Using fax services to automate receipt of problems and despatch of solutions and other information
- Extending use of on-line services such as the Internet.

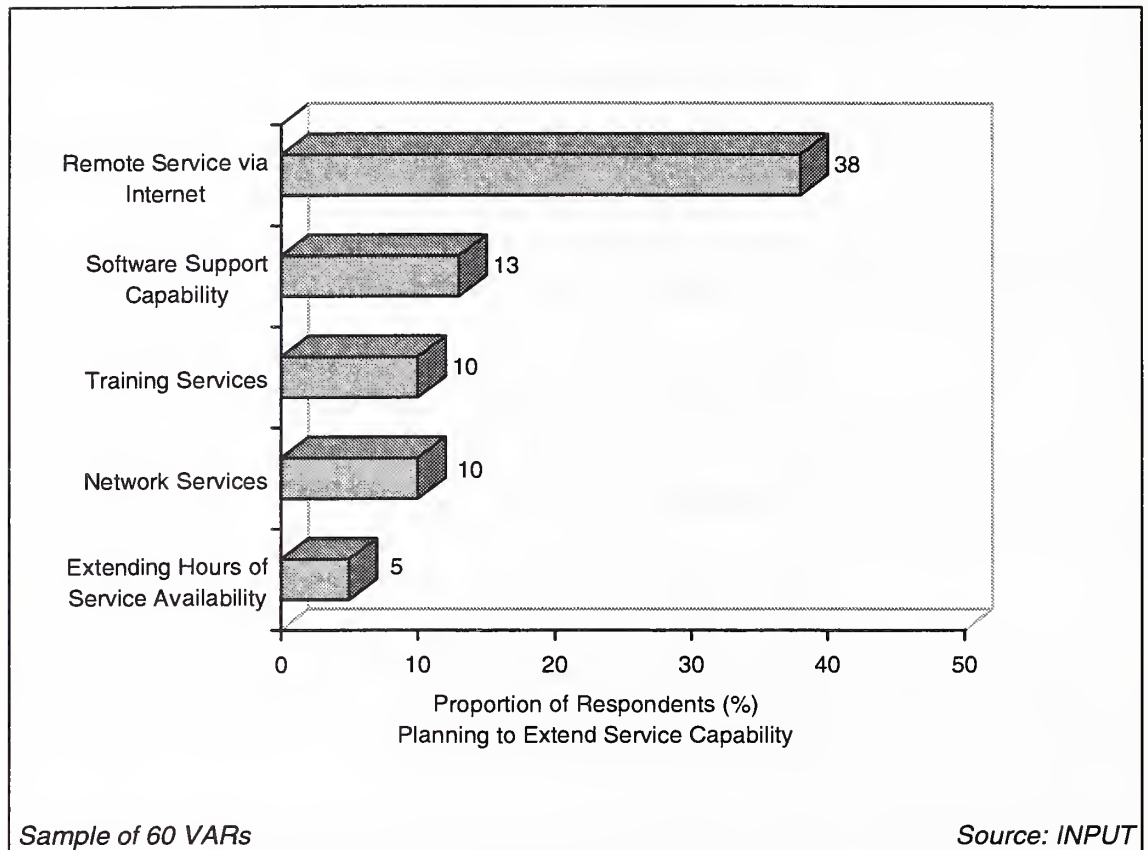
The potential of the Internet as a service delivery mechanism cannot be understated, though for most providers it is still a case of “watch this space”. However, service organisations not offering some form of *on-line* capability are already finding themselves at a competitive disadvantage.

This applies not only to the leading vendors, but to organisations at all points on the value-chain. For example, a recent survey of medium-sized VARs across Europe revealed that the reseller community considers the development of remote service capability to be by far the most important area for future investment.

In the survey, sixty-five percent of VARs indicated that they had plans to significantly improve or extend their service capability. Of this group, well over a third said that their main intention was to exploit the potential of the Internet as a medium for service delivery.
See Exhibit III-5.

Exhibit III-5

Resellers Look to Develop On-Line Service Capability



2. Call Handling Technology Key to Cost Control

The emerging technology which holds the greatest potential for reducing service delivery costs whilst improving quality is Computer Telephony Integration (CTI). The CTI market is still in its infancy, but is set to become a major market over the next few years. With fewer than 100 CTI systems in Europe in 1992, the installed base is forecast to be in the region of 40,000 by the end of the decade. And the IT service function, specifically the *call centre*, will be the boom market for CTI.

By delivering greatly improved call handling, and ease of integration with systems such as Automated Call Distribution (ACD) and Interactive Voice Response (IVR), the benefits of CTI are strongly applicable to the call centre environment, though all levels of service operation will benefit, from helpdesks to field engineers.

Obstacles in the way of CTI growth include the proprietary nature of many PBX private telephone switches and lack of network bandwidth. However, once high bandwidth networks become commonplace, and as standard application programming interfaces are made available by

companies like Microsoft and Novell, CTI will truly emerge as a major business technology.

Strategic deployment of service management technology will drive through the cost savings that are absolutely vital to today's IT service organisation, and will also lay the foundation for delivering higher value customer service in future.

D

Getting Closer to the Customer

1. Partnering With Customers

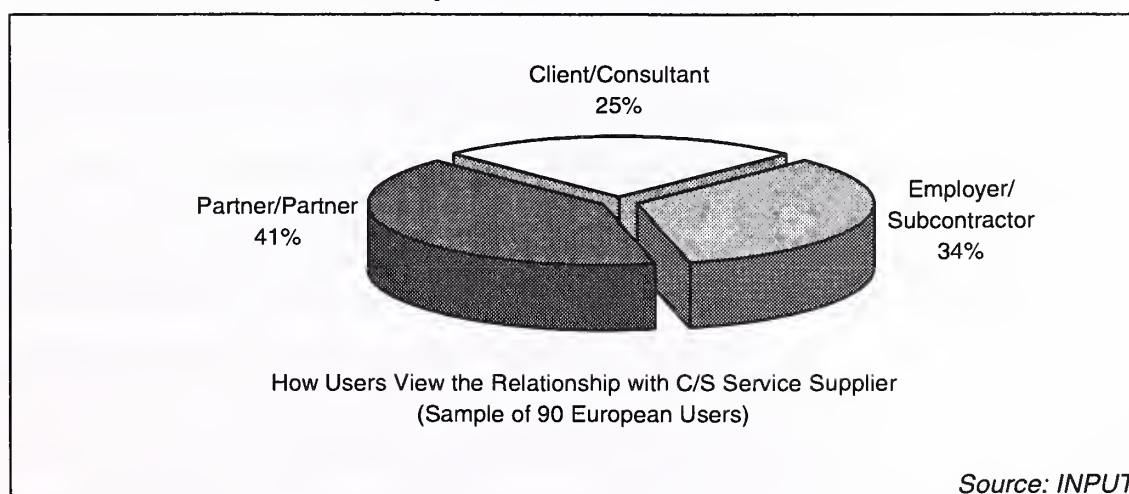
Until relatively recently, the relationship between service supplier and customer was conducted at arms-length. So long as the product was the focus of the service contract, the relationship could afford to be remote and impersonal.

However, as Exhibit III-6 illustrates, users are now demanding a closer relationship with service suppliers. The great majority of users of client/server technology consider that the relationship with their service suppliers should be professional in nature, with over 40% describing the relationship as a partnership.

This shift in attitude towards service providers reflects the complexity of client/server environments, and the desire of users to work closely with expert service providers who can help them get the most from their IT investment.

Exhibit III-6

Users Seek Partnerships With Client/Server Service Providers

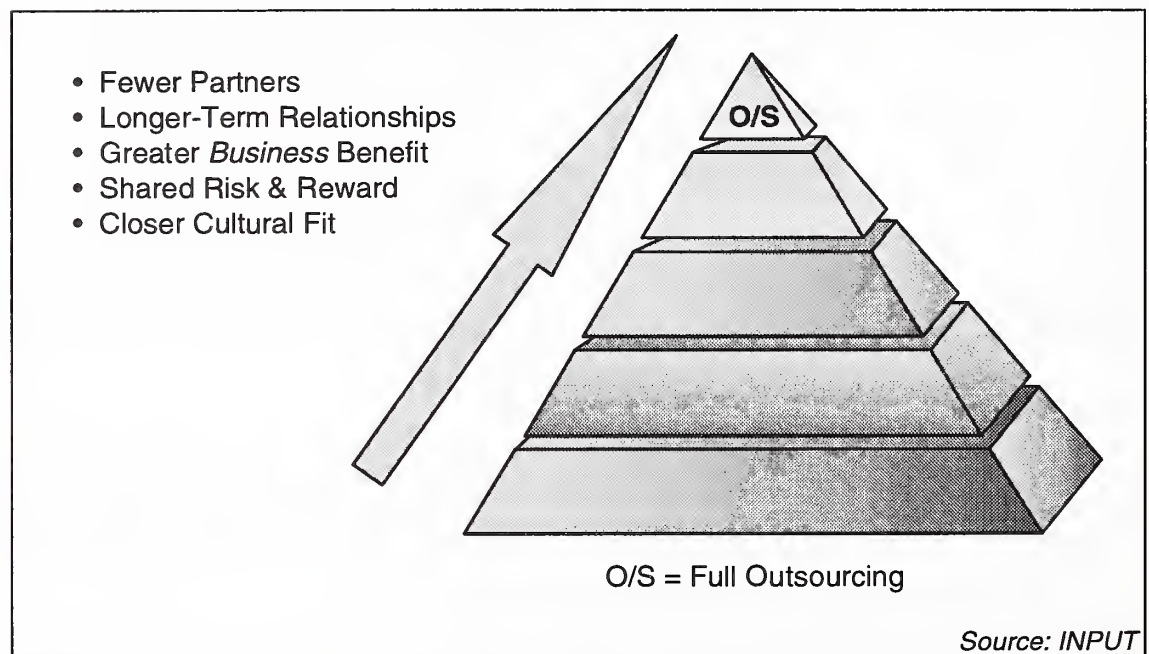


At the simplest level, partnering between IT service suppliers and their customers may be little more than a statement of intent to work more closely together. However, as suppliers begin to offer integrated service solutions instead of isolated point services, the nature of the partnership inevitably becomes more formalised.

Exhibit III-7 shows how the nature of partnership agreements change as higher value services are delivered. Taken to its logical extreme, the partnership becomes a long term commitment based on the principle of shared risk and reward, an increasingly common characteristic of full outsourcing contracts.

Exhibit III-7

The Changing Nature of Supplier/Customer Partnerships



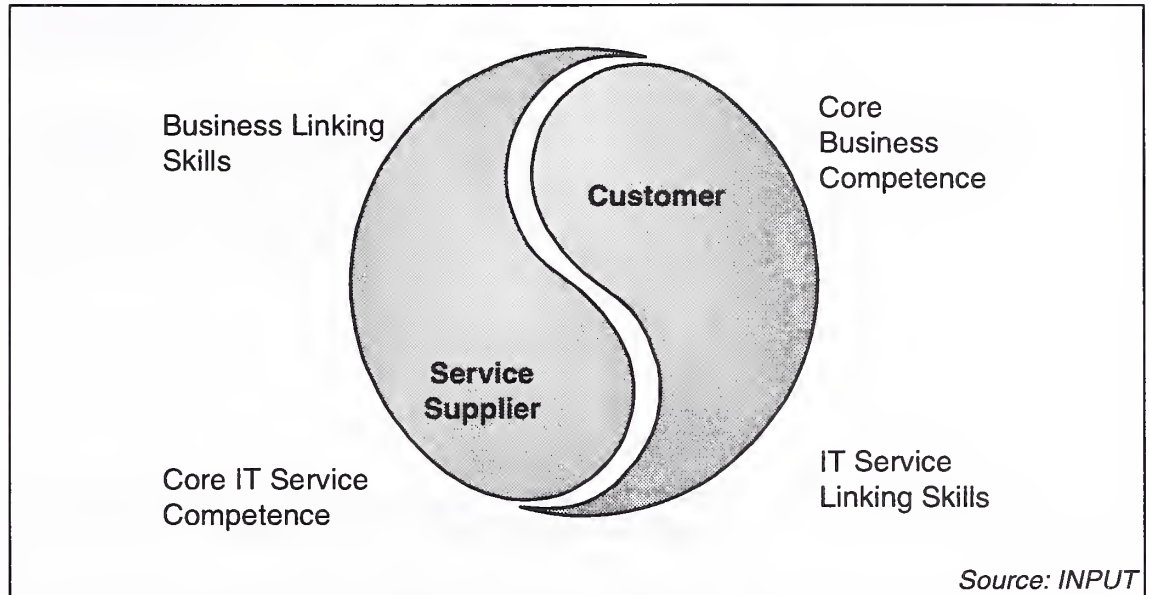
However, even at the sub-outsourcing level, it is increasingly important for service suppliers to adopt the principles of partnership. Recent research confirms that users are actively seeking suppliers with specific experience of their business, which means that service organisations must invest in developing specific industry knowledge and business know-how, to be able to relate to their customers at the right level.

Exhibit III-8 shows in conceptual form how suppliers and their customers can work together more closely. Suppliers must develop some of the knowledge and skills of the customer, in order to fully understand the customer's requirement. However, it is equally important for the

customer to develop an understanding of the supplier's business if a fully co-operative partnership is to be possible.

Exhibit III-8

Linking Skills Improve Supplier/Customer Partnerships



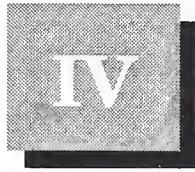
2. Adopting Both Local and Global Outlooks

The experience of recent years indicates that business mergers, acquisitions and alliances are becoming increasingly common. The result will be an increase in the number of globally based corporations, and in globally based purchasing power.

As these corporations begin to look for consistency of their IT and communications infrastructures globally, they will also expect IT services to be manageable on a global basis. The implications for service suppliers will be substantial, since users will expect service contracts and pricing schedules that are consistent across national boundaries.

However, though large corporates will increasingly manage their business via global IT networks, this will not negate the need for local service conditions. To be truly effective, service suppliers must continue to acknowledge regional differences in service requirements, based on differing national attitudes and business cultures.

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The Competitive Environment for IT Customer Services

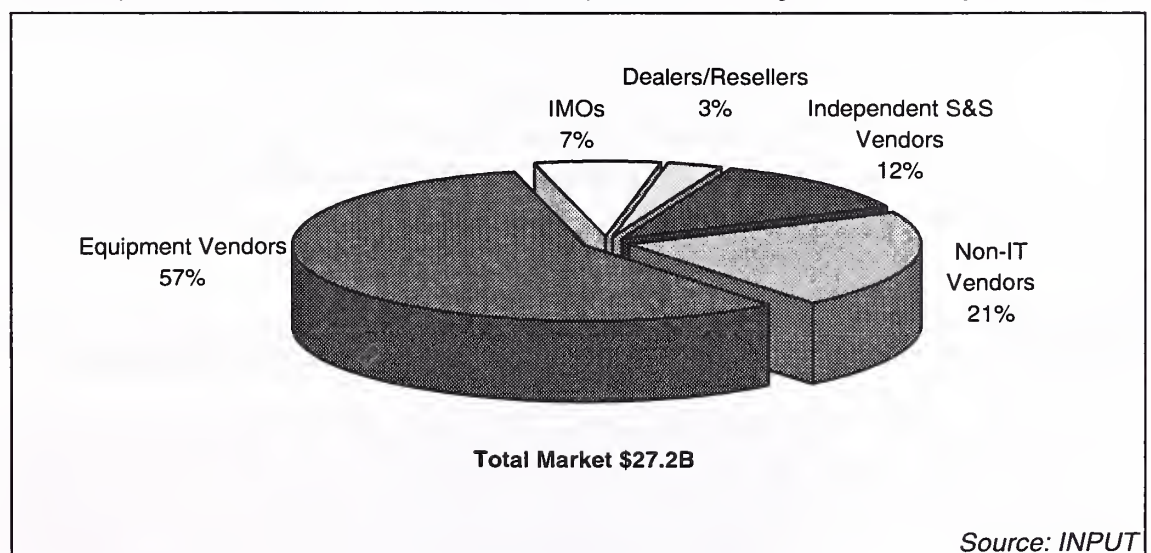
A Principal Players in the IT Customer Services Market

IT industry vendors currently account for 80% of user expenditure for IT customer services in Europe. The remainder of user expenditure is attributable to non-IT vendors including building and construction companies.

Exhibit IV-1 provides an analysis of the 1995 market by type of vendor.

Exhibit IV-1

European Customer Services Expenditure by Vendor Type, 1995



In comparing 1995 shares to those of the previous year, it is significant to note that:

- Equipment vendors' market share has fallen slightly, from 57.2% in 1994, to 56.7%
- Independent maintenance organisations' (IMOs) share has fallen slightly, from 7.3% to 7.1%
- The channel players (dealers, distributors, resellers) have maintained their market share at 3%
- Independent software and services vendors have improved their market share significantly, from 9.4% to 11.6%
- Non-IT vendors have lost market share, falling from 23% to 21.4%.

Overall, the IT vendors are making inroads into the non-IT vendors' market share. Building and construction firms offering a variety of environmental services such as cabling and network installation have lost out to specialist IT companies in the last year.

However, within the IT community the traditional customer services players (equipment manufacturers, independent maintainers and the channel) are themselves losing out to the independent software and services organisations. At a basic level, this is a direct result of the declining value of equipment maintenance services, but it also reflects a shift in demand towards value-added services and to those suppliers who are optimised to deliver these services.

The following sections describe in more detail how the principal players in the market for IT customer services are positioning themselves to meet present market demands.

B

Equipment Vendors Re-engineering for Future Success

The most established players in IT customer services, the equipment vendors, still retain a dominant position in the market. However, many of the leading manufacturers have experienced difficulty in adapting to the new market realities of low margins and increased headcount productivity.

The equipment vendors have lived through the challenge of the independent maintenance organisations in recent years. All manufacturers have been forced to retaliate in the price war which took place in the 1980's and early 1990's, but relatively few have yet been able to successfully re-engineer their business processes to equip them for the new millennium.

However, vendors like Digital, Olivetti and ICL have already made significant progress in their transition from being suppliers of proprietary remedial services, to providers of multivendor service solutions. So much so, that the service arms of these manufacturers (Digital MCS, Oliservice and ICL Sorbus respectively) are successfully establishing themselves as independent organisations in their own right.

Other vendors, including IBM and SNI, are less advanced in their transition. However, both of these equipment giants have made significant progress by developing substantial service capabilities beyond the focus of their own product portfolio.

The principal driver for change has been the shift to multivendor client/server computing, which has presented major challenges for vendors in terms of:

- Reskilling the workforce
- Reengineering old business processes
- Forming strategic partnerships
- Building new styles of customer relationship.

A number of vendors are showing early signs of benefiting from re-engineering their services business models. Four examples are described below.

1. Groupe Bull

Under the guidance of CEO Jean-Marie Descarpentries, Groupe Bull has been decentralised and focused into seven product divisions, four major geographies and three corporate functions. The group returned to profit in 1994, and is forecasting further profits in 1995.

A key part of the new organisation is the Customer Service Division (CSD) which, despite continuing decline in traditional maintenance

revenues (down 9% in 1994), is maintaining overall revenue levels thanks to increased professional services revenues, and an emerging strength in the network services business.

2. SNI

Siemens-Nixdorf is another vendor undergoing a significant culture change at present. SNI's new CEO Gerhard Schulmeyer has swept aside the old functional organisation in favour of a customer-focused, vertical market orientation. In 1994, SNI came close to break-even, following several years of loss.

SNI's service organisation (ITS), having reorganised into four separate lines of business, is beginning to focus on higher value offerings, including a full outsourcing capability. Continued rationalisation can be expected, as SNI seeks to benchmark its service capability against the best in Europe.

3. Olivetti

Olivetti is another equipment giant which has been re-evaluating its positioning of late. CEO Corrado Passera, believing that Olivetti has spread its net too widely in the past, has been refocusing the company onto its core competencies.

The activities of Olivetti's Services Division are clearly seen to be core. Passera has recently reported on "another successful year for the Services Division, with global revenues growing ahead of plan, and profitability maintained against competitive pressures". The Services Division looks set to build upon its strong position in the European multivendor and desktop services markets with the launch of several new distributed systems support services throughout 1995 and 1996.

4. Digital MCS

Digital's Multivendor Customer Services division (MCS) has established itself as the biggest revenue earner within the organisation, contributing 30% to Digital's current worldwide revenues.

Digital MCS launched a new strategy for IT support towards the end of 1994, the key thrust of which is a renewed focus on client/server computing.

Key to MCS's strategy is the belief that successful client/server service providers will be those which can offer total service solutions. In order to

reposition itself as a solutions provider, Digital MCS acknowledged the need to re-engineer its business model in four key areas: service delivery, selling model, infrastructure and offer portfolio.

In 1994, MCS undertook a worldwide change programme to address all four of these areas. It created a dedicated salesforce for service delivery, enhanced its channel partner strategy, and reorientated its internal business practices to become more customer focused.

Such organisational, financial and cultural changes are not restricted to Bull, SNI, Olivetti and Digital, but are widespread. IBM, ICL and others have all undergone significant change in the last two years. The consequences for the customer services market are interesting. By the end of the decade, the names of the key players will not have changed, but the nature of their business will have changed significantly.

Exhibit IV-2 lists the top 10 equipment vendors in Europe in 1994, ranked by total customer services revenue.

Exhibit IV-2

Leading Equipment Vendors, Europe 1994

	Vendor	Customer Services Revenue (\$M)	Market Share (%)
1	IBM	3230	11.9
2	Digital	1775	6.5
3	Siemens-Nixdorf	1645	6.0
4	Hewlett-Packard	965	3.5
5	Bull	900	3.3
6=	Olivetti	860	3.2
6=	ICL	860	3.2
8	AT&T	780	2.9
9	Unisys	705	2.6
10	Sun Microsystems	190	0.7
	Total Listed	11910	43.8
	Total Market	27210	100

Source: INPUT

C

IMOs Look to Alliances for Future Viability

The independent maintenance organisations (IMOs) are finding current market conditions very difficult indeed, for two reasons:

- The steady decline in the market for traditional equipment maintenance. The market for contracted maintenance services across all computer platforms is forecast to decline by 4% CAGR over the next five years
- The IMO's major selling proposition, low cost, no longer has the dominant appeal it once did. Buyers of IT services are looking for *value-added*, not just low cost, services.

The fact that users are increasingly demanding integrated service solutions, of which maintenance is just one component, means that the IMOs are no longer a natural first choice as a service partner. Users are more likely to look first to organisations which can offer a broader range of services, such as the larger equipment vendors and systems integrators.

The dilemma facing the IMOs is thus how to survive in such fiercely competitive conditions. IMOs have adopted a variety of strategies, including:

- Attempting to develop their own value-added services capability
- Extending their services reach by forging strategic alliances with other service organisations
- Leveraging their services and logistics infrastructures by becoming authorised maintenance providers for equipment vendors
- Finding a market niche, perhaps specialising in the repair of legacy equipment.

Many smaller IMOs will have little choice but to specialise and narrow the focus of their activities. The preferred strategy of the larger independents will be to extend their service capability, and to build strategic partnerships wherever possible.

The merger between ICL Customer Services and Sorbus earlier this year sent out a strong message to the industry, perhaps signalling the start of

a major market consolidation phase. It will be interesting to observe how much longer other leading European IMOs can remain truly independent.

Though attempting to develop new value-added service capabilities is proving a difficult task for many IMOs, Getronics in the Netherlands has proved that this feat can be achieved. Getronics has effectively cast off the IMO label by adding substantial software and professional service offerings to its portfolio. By careful financial management and a shrewd acquisitions strategy, Getronics has become the leading independent customer services organisation in Europe today.

Having achieved this transition, Getronics' next objective is to expand its presence outside its home market. The company took a significant step towards this goal when it announced a new alliance with Roccade Informatica Group, with whom they will combine to buy out privately-held Raet NV. In many respects, the progress of Getronics provides IMOs with an object lesson in how to survive and grow in today's customer services marketplace.

Exhibit IV-3 lists the top 10 IMOs in Europe in 1994, ranked by total customer services revenue.

Exhibit IV-3

Leading IMOs, Europe 1994

	Vendor	Customer Services Revenue (\$M)	Market Share (%)
1	Getronics	355	1.3
2	ICG (Consortium)	330	1.2
3	Granada	235	0.9
4	Thomainfor	170	0.6
5	Comma (ND)	120	0.4
6	ACT Network Si	65	0.2
7	Nexor Perinet AB	50	0.2
8	Eltec	35	0.1
9=	Triple P	33	0.1
9=	ServiceTec	33	0.1
	Total Listed	1430	5
	Total Market	27210	100

Source: INPUT

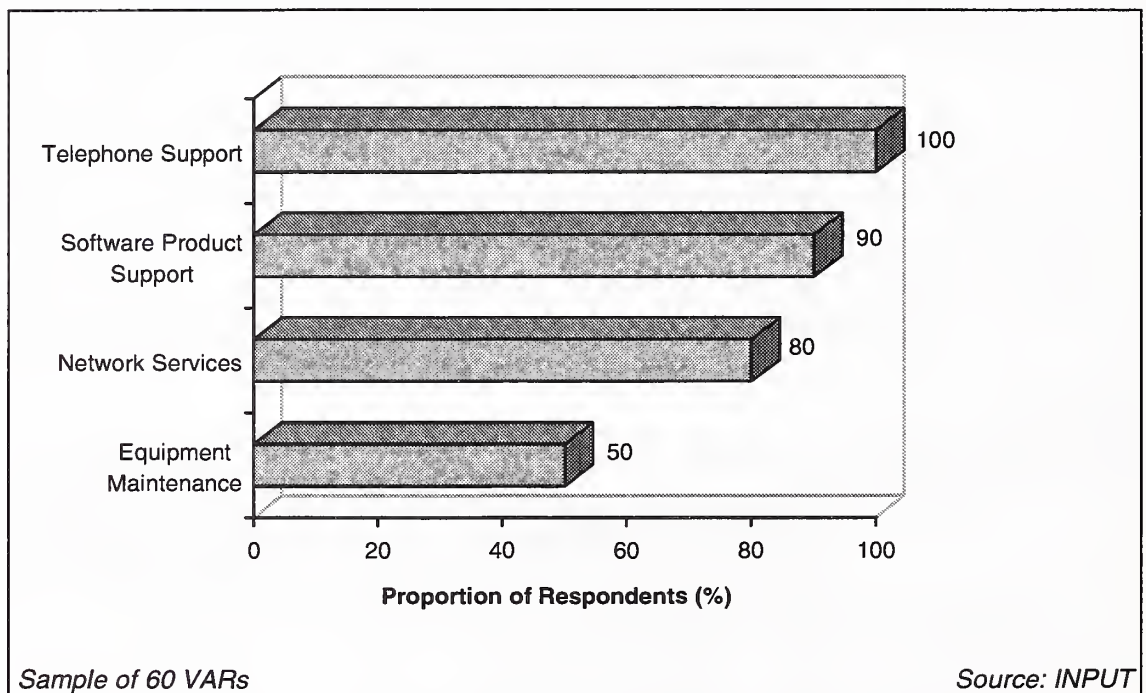
D

Channel Players Seek to Extend Service Capability

The channel players, the dealers and distributors, have not been slow to realise the potential of offering services to their customer base. Many have responded to market demand by developing their own service capabilities, and increasingly consider service to be a vital part of their business. Exhibit IV-4 shows the proportions of value-added resellers (VARs) offering a selection of key customer services.

Exhibit IV-4

Services Currently Offered by the VAR Channel



Most of the leading equipment and software product vendors today have channel development programmes which include authorisation schemes designed to encourage relationships with only the most suitable resellers.

The effect of these channel development initiatives is that the reseller market is beginning to polarise: at one end, there are companies which sell volume products, and at the other end there are companies which offer specialist services such as product support, training or enterprise networking skills.

Slowly, an elite group of resellers who hold all of the major technical authorisations is emerging, and it is this group which the equipment and software vendors are seeking to nurture.

However, vendors must adopt a mature approach to their channel strategy, acknowledging that their resellers' broader business activities may from time to time cause them to act as direct competitors. Product vendors can no longer assume to be the customers' natural choice of service provider. It is essential that vendors play to the strengths of their reseller partners, and accept that *coopetition* with their resellers is now the norm.

Computacenter is a typical example of a PC dealer which has started to emerge as a key player in the desktop services market. While product sales to corporate accounts remains the primary focus of the organisation, Computacenter has recognised the need to target services revenues and has established a separate business unit to do so.

The Comprehensive On-Site Services (COSS) business unit employs 200 personnel, including ten contract managers, and is now estimated to have desktop services revenues of approximately \$15 million.

Other leading European dealers and distributors actively developing services capabilities are listed in Exhibit IV-5.

Exhibit IV-5

Leading Dealers and Distributors, Europe 1994

Company	Territory
Dealers:	
Computacenter	UK, France
Info Products	Netherlands, UK, France, Spain
Compunet	Germany
ISTA	France
ECS	France, Germany, UK, Benelux, Italy
Distributors:	
Computer 2000	Europe
Actebis	Europe
Ingram	UK, France, Germany, Benelux
Merisel	UK, France, Germany, Switzerland
Peacock	Europe

Source: INPUT

E**New Market Entrants Fuel Competitive Conditions**

At the same time as established players are striving to meet the changing demands of the customer services market, new market entrants are emerging. With none of the historical baggage of the equipment vendors and IMOs, these new players are able to apply the benefits of hi-tech service capability and low overhead operations at various points in the service supply chain.

In particular, the area of logistics has been the focus of much recent activity. Carriers such as UPS and DHL have been busy carving a niche by handling equipment vendors' parts distribution needs. Vendors, realising the benefits of outsourcing the logistics side of their business, are using the carriers' mail warehousing and distribution facilities in increasing numbers.

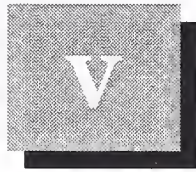
Some fourth party maintenance companies are also now offering logistics services to vendors, including warehousing and distribution facilities. This extension of their role as parts repairers and refurbishers, is opening up new revenue streams for fourth party players, whilst providing product vendors with yet another option to outsource non-core logistics business.

Arguably, it is the independent services companies, such as the outsourcing specialists, who are giving the traditional customer services players the greatest cause for concern. Product vendors are increasingly finding themselves bidding against companies such as EDS, CGS and CSC.

EDS launched its Technical Products Division (TPD) in Europe in 1993, and initially concentrated on building up its product supply and logistics capability. Successes include logistics management on behalf of Memorex Telex and the Tandem Source Company.

TPD relies largely on third party agreements to deliver services, which are strongly focused on the desktop. However, TPD's strategy is to offer clients a long-term relationship which delivers lower costs and business productivity improvements.

In being able to leverage significant industry experience, and boast track records in delivering tangible business benefits, organisations like EDS are currently fuelling the competitive conditions of today's IT customer services market.



Leading Customer Services Vendors by Country

This chapter contains vendor rankings for Europe as a whole, for each of 16 Western European countries, plus Central and Eastern Europe (as a single group).

The analysis for each country gives the revenues of the top 10 vendors analysed by service sector. In addition, for Europe and the leading five countries, a further analysis shows how the remainder of the market is divided between the five principal vendor types:

- Equipment vendors
- Independent maintenance organisations (IMOs)
- Dealers, distributors and Value-added resellers (VARs)
- Independent software and services vendors (ISVs)
- Non-IT industry vendors (mainly construction and building services vendors).

Exhibit V-1

Customer Services Revenues, 1994 — Europe (\$ Millions)

		Equipment Maintenance	Environmental Services	Systems Software Support	Education & Training	Professional Services	Business Continuity Services	Total Customer Services
1	IBM	2450	430	0	220	70	60	3230
2	Digital	925	315	290	155	70	20	1775
3	Siemens-Nixdorf	1305	80	225	0	20	15	1645
4	Hewlett-Packard	565	95	85	90	105	25	965
5	Bull	700	65	60	0	80	0	900
6=	Olivetti	700	80	25	20	35	0	860
6=	ICL	620	65	80	40	40	15	860
8	AT&T	435	90	40	10	205	0	780
9	Unisys	380	95	100	60	40	30	705
10	Getronics	170	60	35	15	60	15	355
11	ICG	330	0	0	0	0	0	330
12	Granada	210	5	0	0	5	15	235
13	Sun Microsystems	120	15	35	10	10	0	187
14	Amdahl	139	2	5	6	20	2	175
15	Thomainfor	100	30	10	0	25	5	170
16=	StorageTek	135	2	10	0	10	0	160
16=	Wang	100	15	20	10	15	0	160
18	Comparex	85	15	15	15	15	11	153
19	Memorex Telex	100	45	0	0	0	0	143
20	Comma (ND)	96	6	6	2	9	0	119
Top 20		9660	1510	1040	650	830	210	13900
Other Equipment Vendors		2340	180	60	120	30	20	2750
Other IMOs		555	70	15	3	50	5	700
VARs		570	50	75	40	75	0	810
ISVs		110	170	540	1930	120	340	3210
Non-Industry Vendors		5	5810	0	0	15	0	5830
Total Market (Rounded)		13250	7800	1730	2750	1120	570	27200

Note: Totals may not add up due to rounding

Source: INPUT

Exhibit V-2

Customer Services Revenues, 1994 — France (FF Millions)

		Equipment Maintenance	Environmental Services	Systems Software Support	Education & Training	Professional Services	Business Continuity Services	Total Customer Services
1	IBM	2350	400	0	210	60	45	3065
2	Bull	1900	95	135	0	235	0	2365
3	Digital	650	220	210	110	55	15	1260
4	HP	510	70	65	65	85	20	815
5	Thomainfor	410	120	45	5	120	20	720
6	AT&T	370	75	30	10	180	0	665
7	SNI	530	15	20	0	0	5	570
8	Olivetti	320	35	10	10	15	0	390
9	ICL	330	5	20	5	10	0	370
10	Unisys	240	60	65	40	25	20	450
	Top 10	7600	1100	595	460	785	130	10670
	Other Equipment Vendors	3300	285	270	155	110	35	4155
	Other IMO's	1250	110	15	5	30	25	1435
	VARs	250	130	30	20	40	0	470
	ISVs	200	20	295	2970	10	410	3905
	Non-Industry Vendors	0	5650	0	0	25	0	5675
	Total Market (Rounded)	12600	7300	1200	3610	1000	600	26310

Note: Totals may not add up due to rounding

Source: INPUT

Exhibit V-3

Customer Services Revenues, 1994 — Germany (DM Millions)

		Equipment Maintenance	Environmental Services	Systems Software Support	Education & Training	Professional Services	Business Continuity Services	Total Customer Services
1	SNI	1260	55	295	0	25	10	1645
2	IBM	980	170	0	80	25	15	1270
3	Digital	270	95	90	45	20	5	525
4	HP	140	50	40	40	35	10	315
5	Unisys	100	25	25	15	10	10	180
6	AT&T	100	20	10	2	45	0	180
7	Comparex	90	15	15	15	15	2	155
8	Bull	100	20	10	0	10	0	140
9	Olivetti	70	10	2	2	3	0	85
10	Sun	60	5	10	3	3	0	80
	Top 10	3160	460	490	200	200	50	4560
	Other Equipment Vendors	720	190	15	70	40	25	1060
	Other IMOs	230	30	2	10	15	10	300
	VARs	210	30	10	20	70	0	340
	ISVs	40	0	95	800	25	140	1100
	Non-Industry Vendors	0	1880	0	0	30	0	1910
	Total Market (Rounded)	4360	2590	610	1100	380	220	9270

Note: Totals may not add up due to rounding

Source: INPUT

Exhibit V-4

Customer Services Revenues, 1994 — UK (£ Millions)

		Equipment Maintenance	Environmental Services	Systems Software Support	Education & Training	Professional Services	Business Continuity Services	Total Customer Services
1	ICL	190	30	35	20	20	5	300
2	Digital	150	50	45	25	10	5	285
3	IBM	200	25	0	20	5	10	260
4	HP	90	10	10	10	15	5	140
5	Unisys	50	15	15	10	5	5	100
6	Granada	80	2	0	0	2	5	90
7	AT&T	50	10	4	3	25	0	90
8	Bull	50	5	5	0	5	0	65
9	SNI	35	10	5	0	1	2	50
10	Olivetti	37	5	1	1	2	0	45
	Top 10	930	160	120	90	90	40	1430
	Other Equipment Vendors	250	50	20	10	15	20	365
	Other IMOs	220	15	20	10	5	10	280
	VARs	45	10	15	10	5	0	85
	ISVs	15	0	100	85	20	45	265
	Non-Industry Vendors	0	670	0	0	5	0	675
	Total Market (Rounded)	1460	910	280	200	140	110	3100

Note: Totals may not add up due to rounding

Source: INPUT

Exhibit V-5

Customer Services Revenues, 1994 — Italy (Lira Billions)

		Equipment Maintenance	Environmental Services	Systems Software Support	Education & Training	Professional Services	Business Continuity Services	Total Customer Services
1=	Olivetti	610	70	20	20	30	0	750
1=	IBM	550	115	0	60	15	10	750
3	Digital	100	35	30	20	10	2	200
4	Bull	140	15	5	0	5	0	165
5	HP	90	15	10	10	15	3	145
6	Unisys	55	15	15	10	5	5	100
7	SNI	80	5	10	0	0	0	95
8	AT&T	40	10	5	0	20	0	75
9	StorageTek	20	0	3	0	3	0	25
10	Sun	10	5	10	2	2	0	25
	Top 10	1700	280	110	120	100	20	2330
	Other Equipment Vendors	180	45	30	25	5	2	290
	Other IMO's	200	10	3	3	2	5	225
	VARs	260	45	3	3	3	0	325
	ISVs	10	30	90	260	5	25	420
	Non-Industry Vendors	0	790	0	3	0	0	800
	Total Market (Rounded)	2350	1200	235	410	120	50	4380

Note: Totals may not add up due to rounding

Source: INPUT

Exhibit V-6

Customer Services Revenues, 1994 — Netherlands (Dfl Millions)

		Equipment Maintenance	Environmental Services	Systems Software Support	Education & Training	Professional Services	Business Continuity Services	Total Customer Services
1	Getronics	250	85	50	25	100	20	530
2	IBM	210	60	0	25	15	10	320
3	Digital	120	40	40	20	10	3	235
4	HP	55	7	7	7	10	2	90
5	AT&T	40	10	3	0	20	0	75
6	Unisys	40	10	10	7	3	3	75
7	SNI	55	10	5	0	0	0	70
8	Bull	45	5	3	0	2	0	55
9	Olivetti	40	5	2	2	2	0	50
10	Triple P	35	1	5	0	2	1	45
	Top 10	890	235	125	85	165	40	1540
	Other Equipment Vendors	420	30	20	20	20	5	515
	Other IMO's	120	10	3	5	5	3	145
	VARs	40	7	10	7	2	0	70
	ISVs	20	5	30	240	10	10	315
	Non-Industry Vendors	0	660	0	0	0	0	660
	Total Market (Rounded)	1490	950	190	360	200	55	3245

Note: Totals may not add up due to rounding

Source: INPUT

Exhibit V-7

Customer Services Revenues, 1994 — Belgium (BF Millions)

		Equipment Maintenance	Environmental Services	Systems Software Support	Education & Training	Professional Services	Business Continuity Services	Total Customer Services
1	IBM	2070	380	0	190	65	55	2760
2	Digital	1340	445	410	220	95	30	2540
3	SNI	2000	160	220	0	0	0	2380
4	Unisys	920	220	255	160	95	55	1700
5	HP	730	95	95	95	125	30	1170
6	Getronics	540	190	95	65	65	30	985
7	Bull	670	95	95	0	65	0	925
8	Olivetti	640	65	30	30	30	0	795
9	AT&T	350	65	65	0	160	0	640
10	Granada	254	0	0	0	0	32	285
	Top 10	9510	1720	1270	760	700	230	14180
	Total Market	13200	6750	1900	2420	760	240	25300

Note: Totals may not add up due to rounding

Source: INPUT

Exhibit V-8

Customer Services Revenues, 1994 — Spain (Pta Millions)

		Equipment Maintenance	Environmental Services	Systems Software Support	Education & Training	Professional Services	Business Continuity Services	Total Customer Services
1	IBM	12900	2500	0	1320	395	170	17290
2	HP	6840	920	790	920	1010	170	10650
3	AT&T	6320	1320	395	0	2200	0	10240
4	Digital	3550	1180	1180	660	265	90	6930
5	SNI	4080	395	130	0	0	0	4600
6	Eltec	4150	420	10	10	10	0	4600
7	Bull	3030	660	265	0	395	0	4350
8	Olivetti	3420	395	130	130	130	0	4200
9	Unisys	1970	525	525	260	260	100	3640
10	ICL	1710	130	260	0	130	0	2230
	Top 10	47970	8445	3684	3300	4795	530	68730
	Total Market	75200	40300	7250	8500	4950	550	137000

Note: Totals may not add up due to rounding

Source: INPUT

Exhibit V-9

Customer Services Revenues, 1994 — Switzerland (SF Millions)

		Equipment Maintenance	Environmental Services	Systems Software Support	Education & Training	Professional Services	Business Continuity Services	Total Customer Services
1	IBM	100	15	0	15	4	3	140
2	AT&T	75	15	4	0	35	0	130
3	Digital	40	12	12	7	3	1	70
4	Unisys	35	8	10	5	5	3	65
5	SNI	50	4	7	0	0	0	60
6	HP	30	4	4	4	5	1	50
7	Bull	15	1	3	0	5	0	25
8	Wang	12	3	3	1	1	0	20
9	ICL	12	0	0	1	0	0	15
10	StorageTek	10	0	0	0	1	0	10
	Top 10	380	60	40	35	60	10	585
	Total Market	775	580	95	160	63	24	1700

Note: Totals may not add up due to rounding

Source: INPUT

Exhibit V-10

Customer Services Revenues, 1994 — Austria (Sch Millions)

		Equipment Maintenance	Environmental Services	Systems Software Support	Education & Training	Professional Services	Business Continuity Services	Total Customer Services
1	IBM	655	85	0	35	20	10	805
2	Digital	380	130	120	65	25	10	730
3	SNI	545	10	0	0	0	0	555
4	Unisys	140	35	35	20	10	8	250
5	HP	130	20	10	20	20	8	210
6	AT&T	100	20	20	0	25	0	165
7	Olivetti	155	20	0	0	8	0	185
8	Bull	110	10	10	0	8	0	140
9	Comparex	55	10	10	10	5	18	110
10	ICL	55	0	0	0	0	0	55
	Top 10	2325	340	205	150	120	55	3200
	Total Market	2890	1740	430	430	130	60	5680

Note: Totals may not add up due to rounding

Source: INPUT

Exhibit V-11

Customer Services Revenues, 1994 — Sweden (SK Millions)

		Equipment Maintenance	Environmental Services	Systems Software Support	Education & Training	Professional Services	Business Continuity Services	Total Customer Services
1	IBM	670	75	0	30	15	15	800
2	Digital	335	110	105	60	30	5	645
3	ICL	335	20	15	10	0	0	380
4	Nexor Perinet AB	265	0	0	0	0	0	265
5	Unisys	100	20	20	15	10	10	175
6	HP	100	15	15	15	15	5	165
7	SNI	125	15	0	0	0	0	140
8	AT&T	70	15	15	0	30	0	130
9	Bull	60	0	20	0	20	0	100
10	Olivetti	75	5	0	0	10	0	90
	Top 10	2135	275	190	130	130	35	2890
	Total Market	3650	2200	350	680	340	95	7310

Note: Totals may not add up due to rounding

Source: INPUT

Exhibit V-12

Customer Services Revenues, 1994 — Denmark (DK Millions)

		Equipment Maintenance	Environmental Services	Systems Software Support	Education & Training	Professional Services	Business Continuity Services	Total Customer Services
1	IBM	485	90	0	30	15	5	625
2	AT&T	135	30	5	0	60	0	230
3	Digital	90	30	30	20	5	0	175
4	ICL	130	5	10	5	10	0	160
5	Olivetti	90	10	10	0	5	0	115
6	SNI	85	25	0	0	0	0	110
7	HP	55	10	10	5	10	0	90
8	Comma (ND)	50	3	3	1	5	0	60
9	Unisys	30	10	5	5	10	0	60
10	Nexor Perinet AB	40	0	0	0	0	0	40
	Top 10	1190	215	75	70	120	5	1660
	Total Market	1765	1305	230	270	200	22	3800

Note: Totals may not add up due to rounding

Source: INPUT

Exhibit V-13

Customer Services Revenues, 1994 — Norway (NK Millions)

		Equipment Maintenance	Environmental Services	Systems Software Support	Education & Training	Professional Services	Business Continuity Services	Total Customer Services
1	Comma (ND)	395	25	25	10	40	0	495
2	IBM	320	55	0	20	10	15	420
3	Olivetti	100	15	10	0	10	0	135
4	Digital	60	20	20	15	10	0	125
5	AT&T	60	15	10	0	25	0	110
6	Bull	50	0	15	0	20	0	85
7	SNI	60	15	0	0	0	0	75
8	HP	40	10	5	10	5	0	70
9	ICL	60	0	0	10	0	0	70
10	Unisys	35	10	5	10	5	0	65
	Top 10	1180	165	90	75	125	15	1650
	Total Market	1780	1110	220	355	160	60	3690

Note: Totals may not add up due to rounding

Source: INPUT

Exhibit V-14

Customer Services Revenues, 1994 — Finland (FK Millions)

		Equipment Maintenance	Environmental Services	Systems Software Support	Education & Training	Professional Services	Business Continuity Services	Total Customer Services
1	ICL	320	25	20	0	15	5	385
2	IBM	150	35	0	10	5	0	200
3	Digital	85	30	30	15	5	0	165
4	SNI	50	5	0	0	0	0	55
5	AT&T	20	5	5	0	10	0	40
6	Unisys	20	5	5	5	0	0	35
7	Tietotehdas	0	0	15	5	5	5	30
8	Nexor Perinet AB	20	0	0	0	0	0	20
9	ComputerVision	20	0	0	0	0	0	20
10	StorageTek	5	0	0	0	5	0	10
	Top 10	690	105	75	35	45	10	960
	Total Market	990	625	150	150	90	50	2060

Note: Totals may not add up due to rounding

Source: INPUT

Exhibit V-15

Customer Services Revenues, 1994 — Ireland (IR£ Millions)

		Equipment Maintenance	Environmental Services	Systems Software Support	Education & Training	Professional Services	Business Continuity Services	Total Customer Services
1	Digital	8	3	3	1	1	0	16
2	Unisys	6	1	1	1	1	1	10
3	IBM	6	2	0	1	1	0	10
4	HP	6	1	1	1	1	0	9
5	ICL	5	1	0	1	0	0	6
6	AT&T	3	1	1	0	1	0	5
7	SNI	4	1	0	0	0	0	5
8	Comma (ND)	2	0	0	0	0	0	2
9	Amdahl	1	0	0	0	0	0	1
10	Bull	1	0	0	0	0	0	1
	Top 10	42	9	5	4	5	1	65
	Total Market	48	22	11	9	13	4	107

Note: Totals may not add up due to rounding

Source: INPUT

Exhibit V-16

Customer Services Revenues, 1994 — Portugal (Esc Millions)

		Equipment Maintenance	Environmental Services	Systems Software Support	Education & Training	Professional Services	Business Continuity Services	Total Customer Services
1	Digital	1430	480	480	270	160	0	2820
2	Unisys	1430	320	320	110	160	160	2500
3	IBM	1910	160	0	110	0	0	2180
4	HP	950	160	160	110	160	0	1540
5	Olivetti	1270	160	0	0	0	0	1430
6	SNI	1110	0	0	0	0	0	1110
7	ICL	640	0	0	250	0	0	890
8	Bull	480	160	0	0	0	0	640
9	AT&T	320	0	0	0	160	0	480
10	Data General	160	0	0	0	0	0	160
	Top 10	9700	1440	960	850	640	160	13750
	Total Market	12700	5000	1000	900	840	300	20700

Note: Totals may not add up due to rounding

Source: INPUT

Exhibit V-17

Customer Services Revenues, 1994 — Greece (Dra Millions)

		Equipment Maintenance	Environmental Services	Systems Software Support	Education & Training	Professional Services	Business Continuity Services	Total Customer Services
1	IBM	3370	300	0	0	0	0	3670
2	Digital	480	200	240	0	0	0	920
3	Bull	720	0	0	0	0	0	720
4	SNI	480	200	0	0	0	0	680
5	AT&T	240	0	0	0	240	0	480
6	ICL	240	0	0	0	0	0	240
7	Rank Xerox	240	0	0	0	0	0	240
8	Unisys	240	0	0	0	0	0	240
9	Wang	240	0	0	0	0	0	240
10	ComputerVision	240	0	0	0	0	0	240
	Top 10	6490	700	240	0	240	0	7670
	Total Market	7910	800	1600	1780	650	155	12900

Note: Totals may not add up due to rounding

Source: INPUT

Exhibit V-18

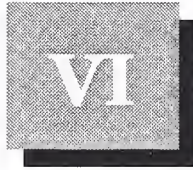
Customer Services Revenues, 1994 — Eastern Europe 1994 (\$ Millions)

		Equipment Maintenance	Environmental Services	Systems Software Support	Education & Training	Professional Services	Business Continuity Services	Total Customer Services
1	IBM	28	2	0	2	1	0	33
2	Unisys	10	2	3	2	1	1	19
3	ICL	7	1	2	2	1	0	13
4	Digital	10	2	0	0	0	0	12
5	SNI	6	2	0	0	0	0	8
6	AT&T	1	0	0	0	1	0	2
7	Bull	1	0	0	0	1	0	2
8	Rank Xerox	2	0	0	0	0	0	2
9	Tandem	2	0	0	0	0	0	2
10	Comparex	1	0	0	0	0	0	1
	Top 10	68	9	5	6	5	1	94
	Total Market	195	48	10	41	14	2	310

Note: Totals may not add up due to rounding

Source: INPUT

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Revenue Analysis of Top 20 Customer Services Vendors

This chapter contains estimates of the 1994 revenues of the leading 20 customer services vendors in Europe. Each vendor's revenues (in \$ millions) are analysed by service sector and by country.

Vendors are presented in order of ranking by total customer services revenue. See Chapter V for the complete top 20 list.

Note that ICG, the International Computer Group, is ranked 11th in the top 20 list of customer services vendors (see Exhibit V-1). However, this chapter does not contain a detailed analysis for this organisation. ICG is a joint venture between a number of national service organisations (including Computacenter in the UK and CompuNet in Germany). INPUT records the revenues of the ICG member organisations at the country level, but reflects the combined group revenues at the European level only.

Exhibit VI-1

European Revenues — IBM Customer Services, 1994 (\$ Millions)

	Equipment Maintenance	Environmental Services	Systems Software Support	Education & Training	Professional Services	Business Continuity Services	Total Customer Services
Total - All countries	2450	430	0	220	70	60	3230
France	440	75	0	40	11	8	575
Germany	630	110	0	50	15	9	815
U.K.	310	40	0	33	10	17	410
Italy	340	70	0	36	10	5	460
Netherlands	120	35	0	15	8	5	185
Belgium/Lux'	65	12	0	6	2	2	90
Spain	98	19	0	10	3	2	130
Switzerland	78	10	0	12	3	2	105
Austria	60	8	0	3	2	1	75
Sweden	90	10	0	4	2	2	110
Denmark	80	15	0	5	2	1	105
Norway	47	8	0	3	1	2	60
Finland	32	7	0	2	1	0	40
Ireland	10	3	0	1	1	0	15
Portugal	12	1	0	1	0	0	15
Greece	14	2	0	0	0	0	15
Eastern Europe	28	2	0	2	1	0	35

Note: Totals may not add up due to rounding

Source: INPUT

Exhibit VI-2

European Revenues — Digital Customer Services, 1994 (\$ Millions)

	Equipment Maintenance	Environmental Services	Systems Software Support	Education & Training	Professional Services	Business Continuity Services	Total Customer Services
Total All-countries	925	315	290	155	70	20	1775
France	122	42	39	21	10	3	240
Germany	175	60	56	30	14	4	340
U.K.	233	79	74	40	19	5	450
Italy	63	22	20	11	5	1	120
Netherlands	70	24	22	12	6	2	140
Belgium/Lux'	42	14	13	7	3	1	80
Spain	27	9	9	5	2	1	55
Switzerland	28	9	9	5	2	1	55
Austria	35	12	11	6	3	1	70
Sweden	45	15	14	8	4	1	90
Denmark	15	5	5	3	1	0	30
Norway	9	3	3	2	1	0	20
Finland	18	6	6	3	1	0	35
Ireland	13	4	4	2	1	0	25
Portugal	9	3	3	2	1	0	20
Greece	2	1	1	0	0	0	5
Eastern Europe	10	2	0	0	0	0	12

Note: Totals may not add up due to rounding

Source: INPUT

Exhibit VI-3

European Revenues — Siemens-Nixdorf Customer Services, 1994 (\$ Millions)

	Equipment Maintenance	Environmental Services	Systems Software Support	Education & Training	Professional Services	Business Continuity Services	Total Customer Services
Total - All countries	1305	80	225	0	20	15	1645
France	99	3	4	0	0	1	110
Germany	814	34	190	0	17	6	1060
U.K.	55	13	8	0	2	3	80
Italy	48	3	6	0	0	0	60
Netherlands	31	5	3	0	0	0	40
Belgium/Lux'	63	5	7	0	0	0	75
Spain	31	3	1	0	0	0	35
Switzerland	38	3	5	0	0	0	45
Austria	50	1	0	0	0	0	50
Sweden	17	2	0	0	0	0	20
Denmark	14	4	0	0	0	0	20
Norway	9	2	0	0	0	0	10
Finland	10	1	0	0	0	0	10
Ireland	6	2	0	0	0	0	8
Portugal	7	0	0	0	0	0	7
Greece	2	1	0	0	0	0	3
Eastern Europe	6	2	0	0	0	0	8

*Note: Totals may not add up due to rounding**Source: INPUT*

Exhibit VI-4

European Revenues — Hewlett-Packard Customer Services, 1994 (\$ Millions)

	Equipment Maintenance	Environmental Services	Systems Software Support	Education & Training	Professional Services	Business Continuity Services	Total Customer Services
Total - All countries	565	95	85	90	105	25	965
France	95	13	12	12	16	4	150
Germany	90	31	26	27	23	6	205
U.K.	141	19	17	18	24	6	225
Italy	55	8	7	7	9	2	90
Netherlands	31	4	4	4	5	1	50
Belgium/Lux'	23	3	3	3	4	1	40
Spain	52	7	6	7	9	2	85
Switzerland	23	3	3	3	4	1	40
Austria	12	2	1	2	2	1	20
Sweden	13	2	2	2	2	1	22
Denmark	9	1	1	1	2	0	15
Norway	6	1	1	1	1	0	10
Finland	1	0	0	0	0	0	1
Ireland	9	1	1	1	2	0	15
Portugal	6	1	1	1	1	0	10
Greece	0	0	0	0	0	0	0
Eastern Europe	1	0	0	0	0	0	1

Note: Totals may not add up due to rounding

Source: INPUT

Exhibit VI-5

European Revenues — Bull Customer Services, 1994 (\$ Millions)

	Equipment Maintenance	Environmental Services	Systems Software Support	Education & Training	Professional Services	Business Continuity Services	Total Customer Services
Total - All countries	700	65	60	0	80	0	900
France	356	18	25	0	44	0	445
Germany	64	14	5	0	7	0	90
U.K.	75	7	11	0	6	0	100
Italy	85	10	3	0	4	0	100
Netherlands	25	3	2	0	1	0	30
Belgium/Lux'	21	3	3	0	2	0	30
Spain	23	5	2	0	3	0	35
Switzerland	10	1	2	0	3	0	15
Austria	10	1	1	0	1	0	15
Sweden	8	0	3	0	3	0	15
Denmark	5	0	1	0	0	0	6
Norway	7	0	2	0	3	0	12
Finland	1	0	0	0	0	0	1
Ireland	2	0	0	0	0	0	2
Portugal	3	1	0	0	0	0	4
Greece	3	0	0	0	0	0	3
Eastern Europe	1	0	0	0	1	0	2

Note: Totals may not add up due to rounding

Source: INPUT

Exhibit VI-6

European Revenues — Olivetti Customer Services, 1994 (\$ Millions)

	Equipment Maintenance	Environmental Services	Systems Software Support	Education & Training	Professional Services	Business Continuity Services	Total Customer Services
Total - All countries	700	80	25	20	35	0	860
France	60	7	2	2	3	0	75
Germany	44	5	1	1	2	0	55
U.K.	58	7	2	2	3	0	70
Italy	378	43	12	12	19	0	465
Netherlands	23	3	1	1	1	0	30
Belgium/Lux'	20	2	1	1	1	0	25
Spain	26	3	1	1	1	0	30
Switzerland	8	1	0	0	0	0	10
Austria	14	2	0	0	1	0	20
Sweden	10	1	0	0	1	0	12
Denmark	15	2	1	0	1	0	20
Norway	15	2	1	0	1	0	20
Finland	1	0	0	0	0	0	1
Ireland	1	0	0	0	0	0	1
Portugal	8	1	0	0	0	0	10
Greece	1	0	0	0	0	0	1
Eastern Europe	1	0	0	0	0	0	1

Note: Totals may not add up due to rounding

Source: INPUT

Exhibit VI-7

European Revenues — ICL Sorbus Customer Services, 1994 (\$ Millions)

	Equipment Maintenance	Environmental Services	Systems Software Support	Education & Training	Professional Services	Business Continuity Services	Total Customer Services
Total - All countries	620	65	80	40	40	15	860
France	61	1	4	1	2	0	70
Germany	33	1	2	1	2	0	40
U.K.	298	50	57	28	28	11	470
Italy	13	0	0	1	0	0	15
Netherlands	21	1	3	0	0	0	25
Belgium/Lux'	5	0	1	1	0	0	7
Spain	13	1	2	0	1	0	20
Switzerland	9	0	0	1	0	0	10
Austria	5	0	0	0	0	0	5
Sweden	45	3	2	1	0	0	50
Denmark	21	1	2	1	2	0	30
Norway	9	0	0	1	0	0	10
Finland	68	5	4	0	3	1	80
Ireland	7	1	0	1	0	0	10
Portugal	4	0	0	2	0	0	6
Greece	1	0	0	0	0	0	1
Eastern Europe	7	1	2	2	1	0	15

Note: Totals may not add up due to rounding

Source: INPUT

Exhibit VI-8

European Revenues — AT&T Customer Services, 1994 (\$ Millions)

	Equipment Maintenance	Environmental Services	Systems Software Support	Education & Training	Professional Services	Business Continuity Services	Total Customer Services
Total - All countries	435	90	40	10	205	0	780
France	70	14	5	2	34	0	125
Germany	65	14	5	1	30	0	115
U.K.	74	15	7	5	38	0	140
Italy	26	5	3	0	12	0	45
Netherlands	23	5	2	0	11	0	40
Belgium/Lux'	11	2	2	0	5	0	20
Spain	48	10	3	0	21	0	80
Switzerland	57	12	3	0	25	0	100
Austria	9	2	2	0	4	0	15
Sweden	9	2	2	0	4	0	15
Denmark	22	5	1	0	10	0	40
Norway	9	2	1	0	4	0	15
Finland	4	1	1	0	2	0	8
Ireland	4	1	1	0	2	0	8
Portugal	2	0	0	0	1	0	3
Greece	1	0	0	0	1	0	2
Eastern Europe	1	0	0	0	1	0	2

Note: Totals may not add up due to rounding

Source: INPUT

Exhibit VI-9

European Revenues — Unisys Customer Services, 1994 (\$ Millions)

	Equipment Maintenance	Environmental Services	Systems Software Support	Education & Training	Professional Services	Business Continuity Services	Total Customer Services
Total - All countries	380	95	100	60	40	30	705
France	45	11	12	7	5	4	85
Germany	63	15	16	10	7	5	115
U.K.	81	20	21	13	9	6	150
Italy	33	8	9	5	4	3	60
Netherlands	22	5	6	4	2	2	40
Belgium/Lux ¹	29	7	8	5	3	2	55
Spain	15	4	4	2	2	1	30
Switzerland	26	6	7	4	3	2	50
Austria	13	3	3	2	1	1	25
Sweden	13	3	3	2	1	1	25
Denmark	5	1	1	1	1	0	10
Norway	5	1	1	1	1	0	10
Finland	4	1	1	1	0	0	7
Ireland	9	2	2	1	1	1	15
Portugal	9	2	2	1	1	1	15
Greece	1	0	0	0	0	0	1
Eastern Europe	10	2	3	2	1	1	20

Note: Totals may not add up due to rounding

Source: INPUT

Exhibit VI-10

European Revenues — Getronics Customer Services, 1994 (\$ Millions)

	Equipment Maintenance	Environmental Services	Systems Software Support	Education & Training	Professional Services	Business Continuity Services	Total Customer Services
Total - All countries	170	60	35	15	60	15	355
France	0	0	0	0	0	0	0
Germany	0	0	0	0	0	0	0
U.K.	0	0	0	0	0	0	0
Italy	0	0	0	0	0	0	0
Netherlands	144	50	28	13	59	11	305
Belgium/Lux'	17	6	3	2	2	1	30
Spain	7	2	1	1	1	1	15
Switzerland	0	0	0	0	0	0	0
Austria	0	0	0	0	0	0	0
Sweden	0	0	0	0	0	0	0
Denmark	0	0	0	0	0	0	0
Norway	0	0	0	0	0	0	0
Finland	0	0	0	0	0	0	0
Ireland	0	0	0	0	0	0	0
Portugal	0	0	0	0	0	0	0
Greece	0	0	0	0	0	0	0
Eastern Europe	0	0	0	0	0	0	0

Note: Totals may not add up due to rounding

Source: INPUT

Exhibit VI-11

European Revenues — Granada Customer Services, 1994 (\$ Millions)

	Equipment Maintenance	Environmental Services	Systems Software Support	Education & Training	Professional Services	Business Continuity Services	Total Customer Services
Total - All countries	210	5	0	0	5	15	235
France	11	0	0	0	0	1	12
Germany	15	0	0	0	0	1	16
U.K.	125	3	0	0	3	8	140
Italy	13	0	0	0	0	1	14
Netherlands	11	0	0	0	0	1	12
Belgium/Lux'	8	0	0	0	0	1	9
Spain	13	0	0	0	0	1	14
Switzerland	8	0	0	0	0	0	8
Austria	0	0	0	0	0	0	0
Sweden	5	0	0	0	0	0	5
Denmark	0	0	0	0	0	0	0
Norway	0	0	0	0	0	0	0
Finland	0	0	0	0	0	0	0
Ireland	0	0	0	0	0	0	0
Portugal	0	0	0	0	0	0	0
Greece	0	0	0	0	0	0	0
Eastern Europe	0	0	0	0	0	0	0

*Note: Totals may not add up due to rounding**Source: INPUT*

Exhibit VI-12

European Revenues — Sun Microsystems Customer Services, 1994 (\$ Millions)

	Equipment Maintenance	Environmental Services	Systems Software Support	Education & Training	Professional Services	Business Continuity Services	Total Customer Services
Total - All countries	120	15	35	10	10	0	190
France	15	4	9	2	2	0	32
Germany	36	3	7	2	2	0	50
U.K.	29	2	6	2	2	0	40
Italy	7	2	5	1	1	0	16
Netherlands	6	1	1	0	0	0	8
Belgium/Lux'	5	0	1	0	0	0	6
Spain	5	2	3	1	1	0	12
Switzerland	4	0	1	0	0	0	5
Austria	3	0	1	0	0	0	4
Sweden	3	0	1	0	0	0	4
Denmark	2	0	0	0	0	0	2
Norway	1	0	0	0	0	0	1
Finland	1	0	0	0	0	0	1
Ireland	1	0	0	0	0	0	1
Portugal	0	0	0	0	0	0	0
Greece	0	0	0	0	0	0	0
Eastern Europe	0	0	0	0	0	0	0

Note: Totals may not add up due to rounding

Source: INPUT

Exhibit VI-13

European Revenues — Amdahl Customer Services, 1994 (\$ Millions)

	Equipment Maintenance	Environmental Services	Systems Software Support	Education & Training	Professional Services	Business Continuity Services	Total Customer Services
Total - All countries	140	2	5	5	20	2	175
France	21	0	1	1	3	0	25
Germany	31	0	1	1	5	1	40
U.K.	49	1	2	2	7	1	60
Italy	7	0	0	0	1	0	8
Netherlands	6	0	0	0	1	0	7
Belgium/Lux ¹	6	0	0	0	1	0	7
Spain	1	0	0	0	0	0	1
Switzerland	4	0	0	0	1	0	5
Austria	2	0	0	0	0	0	2
Sweden	2	0	0	0	0	0	2
Denmark	5	0	0	0	1	0	6
Norway	5	0	0	0	1	0	6
Finland	0	0	0	0	0	0	0
Ireland	2	0	0	0	0	0	2
Portugal	0	0	0	0	0	0	0
Greece	0	0	0	0	0	0	0
Eastern Europe	0	0	0	0	0	0	0

Note: Totals may not add up due to rounding

Source: INPUT

Exhibit VI-14

European Revenues — Thomainfor Customer Services, 1994 (\$ Millions)

	Equipment Maintenance	Environmental Services	Systems Software Support	Education & Training	Professional Services	Business Continuity Services	Total Customer Services
Total - All countries	100	30	10	0	25	5	170
France	76	22	8	1	22	4	135
Germany	7	2	1	0	1	2	15
U.K.	0	0	0	0	0	0	0
Italy	0	0	0	0	0	0	0
Netherlands	0	0	0	0	0	0	0
Belgium/Lux'	4	2	0	0	1	0	7
Spain	4	1	0	0	1	0	6
Switzerland	3	1	0	0	1	0	5
Austria	3	1	0	0	1	0	5
Sweden	0	0	0	0	0	0	0
Denmark	0	0	0	0	0	0	0
Norway	0	0	0	0	0	0	0
Finland	0	0	0	0	0	0	0
Ireland	0	0	0	0	0	0	0
Portugal	0	0	0	0	0	0	0
Greece	0	0	0	0	0	0	0
Eastern Europe	0	0	0	0	0	0	0

Note: Totals may not add up due to rounding

Source: INPUT

Exhibit VI-15

European Revenues — StorageTek Customer Services, 1994 (\$ Millions)

	Equipment Maintenance	Environmental Services	Systems Software Support	Education & Training	Professional Services	Business Continuity Services	Total Customer Services
Total - All countries	135	2	10	0	12	0	160
France	28	0	2	0	0	0	30
Germany	38	1	2	0	0	0	40
U.K.	23	0	2	0	6	0	30
Italy	12	0	2	0	2	0	15
Netherlands	3	0	0	0	0	0	3
Belgium/Lux'	4	0	0	0	0	0	4
Spain	3	0	0	0	0	0	3
Switzerland	8	0	0	0	1	0	9
Austria	2	0	0	0	0	0	2
Sweden	5	0	0	0	1	0	6
Denmark	4	0	0	0	0	0	4
Norway	2	0	0	0	1	0	3
Finland	1	0	0	0	1	0	2
Ireland	1	0	0	0	0	0	1
Portugal	0	0	0	0	0	0	0
Greece	0	0	0	0	0	0	0
Eastern Europe	0	0	0	0	0	0	0

Note: Totals may not add up due to rounding

Source: INPUT

Exhibit VI-16

European Revenues — Wang Customer Services, 1994 (\$ Millions)

	Equipment Maintenance	Environmental Services	Systems Software Support	Education & Training	Professional Services	Business Continuity Services	Total Customer Services
Total - All countries	100	15	20	10	15	0	160
France	16	3	3	2	2	0	30
Germany	12	2	2	1	2	0	20
U.K.	20	3	4	2	3	0	30
Italy	8	1	2	1	1	0	13
Netherlands	9	2	2	1	1	0	15
Belgium/Lux ¹	4	1	1	0	1	0	7
Spain	7	1	1	1	1	0	10
Switzerland	9	2	2	1	1	0	15
Austria	2	0	0	0	0	0	2
Sweden	4	1	1	0	1	0	7
Denmark	2	0	0	0	0	0	2
Norway	1	0	0	0	0	0	1
Finland	2	0	0	0	0	0	2
Ireland	2	0	0	0	0	0	2
Portugal	1	0	0	0	0	0	1
Greece	1	0	0	0	0	0	1
Eastern Europe	0	0	0	0	0	0	0

Note: Totals may not add up due to rounding

Source: INPUT

Exhibit VI-17

European Revenues — Comparex Customer Services, 1994 (\$ Millions)

	Equipment Maintenance	Environmental Services	Systems Software Support	Education & Training	Professional Services	Business Continuity Services	Total Customer Services
Total - All countries	85	15	15	15	15	10	155
France	4	1	1	1	1	2	10
Germany	59	10	9	10	10	1	100
U.K.	6	1	1	1	1	1	10
Italy	2	0	0	0	0	1	3
Netherlands	3	0	0	0	0	1	4
Belgium/Lux'	2	0	0	0	0	1	3
Spain	3	0	0	0	0	1	4
Switzerland	2	0	0	0	0	1	3
Austria	5	1	1	1	1	2	10
Sweden	1	0	0	0	0	0	1
Denmark	1	0	0	0	0	0	1
Norway	1	0	0	0	0	0	1
Finland	0	0	0	0	0	0	0
Ireland	1	0	0	0	0	0	1
Portugal	0	0	0	0	0	0	0
Greece	0	0	0	0	0	0	0
Eastern Europe	1	0	0	0	0	0	1

Note: Totals may not add up due to rounding

Source: INPUT

Exhibit VI-18

European Revenues — Memorex Telex Customer Services, 1994 (\$ Millions)

	Equipment Maintenance	Environmental Services	Systems Software Support	Education & Training	Professional Services	Business Continuity Services	Total Customer Services
Total - All countries	100	45	0	0	0	0	145
France	22	8	0	0	0	0	30
Germany	15	15	0	0	0	0	30
U.K.	22	8	0	0	0	0	30
Italy	11	4	0	0	0	0	15
Netherlands	5	2	0	0	0	0	7
Belgium/Lux ¹	4	2	0	0	0	0	6
Spain	7	2	0	0	0	0	9
Switzerland	3	1	0	0	0	0	4
Austria	2	1	0	0	0	0	3
Sweden	2	1	0	0	0	0	3
Denmark	2	1	0	0	0	0	3
Norway	1	0	0	0	0	0	1
Finland	1	0	0	0	0	0	1
Ireland	1	0	0	0	0	0	1
Portugal	0	0	0	0	0	0	0
Greece	0	0	0	0	0	0	0
Eastern Europe	0	0	0	0	0	0	0

Note: Totals may not add up due to rounding

Source: INPUT

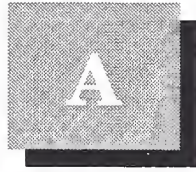
Exhibit VI-19

European Revenues — Comma (Norsk Data) Customer Services, 1994 (\$ Millions)

	Equipment Maintenance	Environmental Services	Systems Software Support	Education & Training	Professional Services	Business Continuity Services	Total Customer Services
Total - All countries	95	6	6	2	10	0	120
France	0	0	0	0	0	0	0
Germany	0	0	0	0	0	0	0
U.K.	20	1	1	1	2	0	25
Italy	0	0	0	0	0	0	0
Netherlands	0	0	0	0	0	0	0
Belgium/Lux'	0	0	0	0	0	0	0
Spain	0	0	0	0	0	0	0
Switzerland	0	0	0	0	0	0	0
Austria	0	0	0	0	0	0	0
Sweden	5	0	0	0	0	0	5
Denmark	8	1	1	0	1	0	10
Norway	58	4	4	1	6	0	75
Finland	2	0	0	0	0	0	2
Ireland	3	0	0	0	0	0	3
Portugal	0	0	0	0	0	0	0
Greece	0	0	0	0	0	0	0
Eastern Europe	0	0	0	0	0	0	0

Note: Totals may not add up due to rounding

Source: INPUT



The Customer Services Market Defined

A

INPUT's View of The Customer Services Market

INPUT's view of the customer services market is illustrated in schematic form in Exhibit A-1. This exhibit illustrates the overall structure of the hardware products or equipment market for systems, and the relationship between customer services and the other segments of the equipment market.

Included within INPUT's definition of customer services are six service sectors:

- Equipment maintenance
- Environmental services
- Systems software support
- Education and training
- Professional services
- Business continuity services.

Excluded from INPUT's definition of the customer services market, as essentially product markets, are:

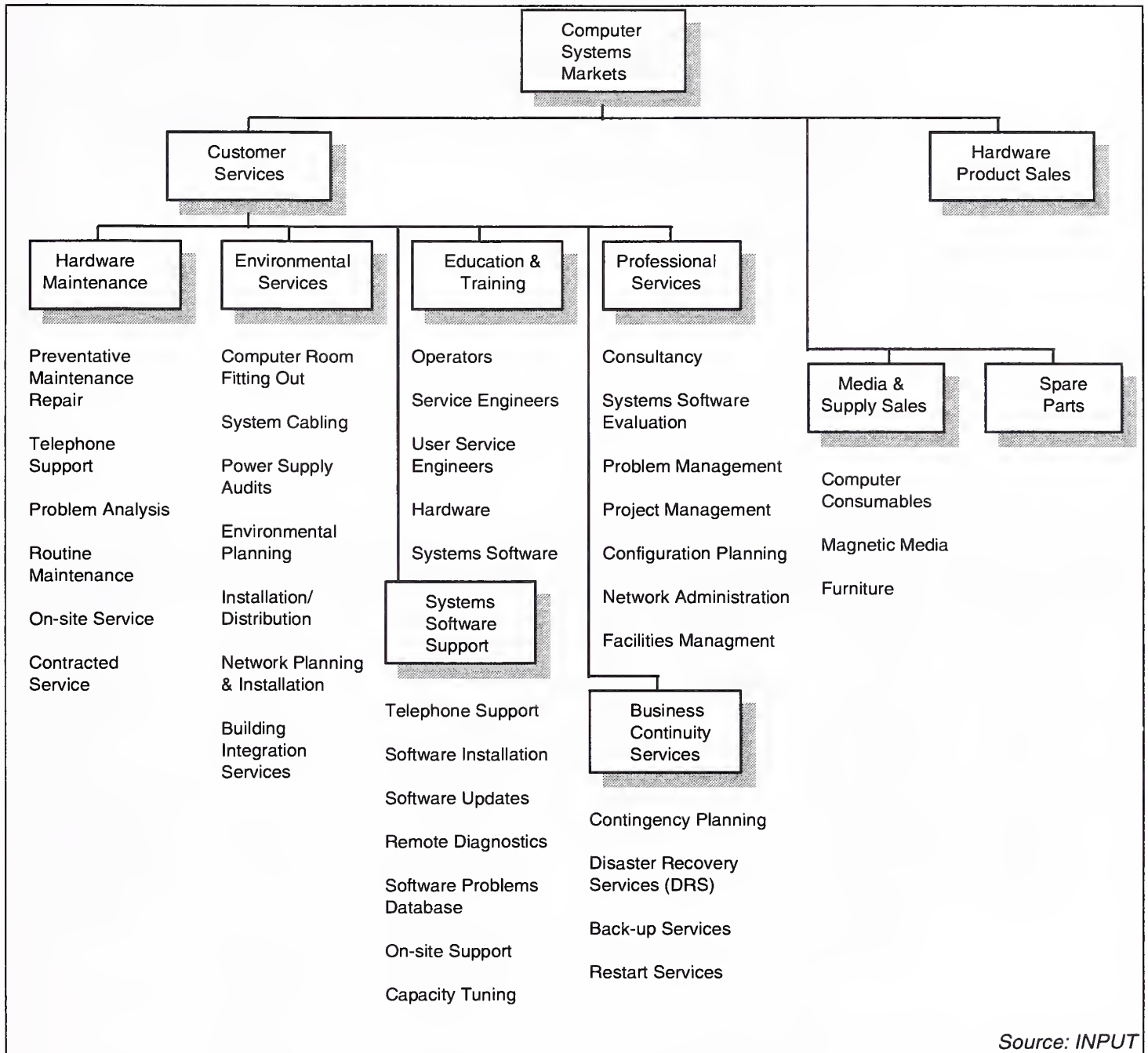
- Sales of spare parts

- Media and supplies sales
- Hardware product sales themselves.

Exhibit A-1 indicates the principal activities undertaken within each of the six service sectors. In each service sector, INPUT's definition of user expenditure includes only those services provided to users by an external organisation on a chargeable basis. Services provided by subsidiaries or internal resources are considered unavailable for open tender. They are therefore excluded from the open market but included in the captive market potential.

Exhibit A-1

Customer Services Market Structure

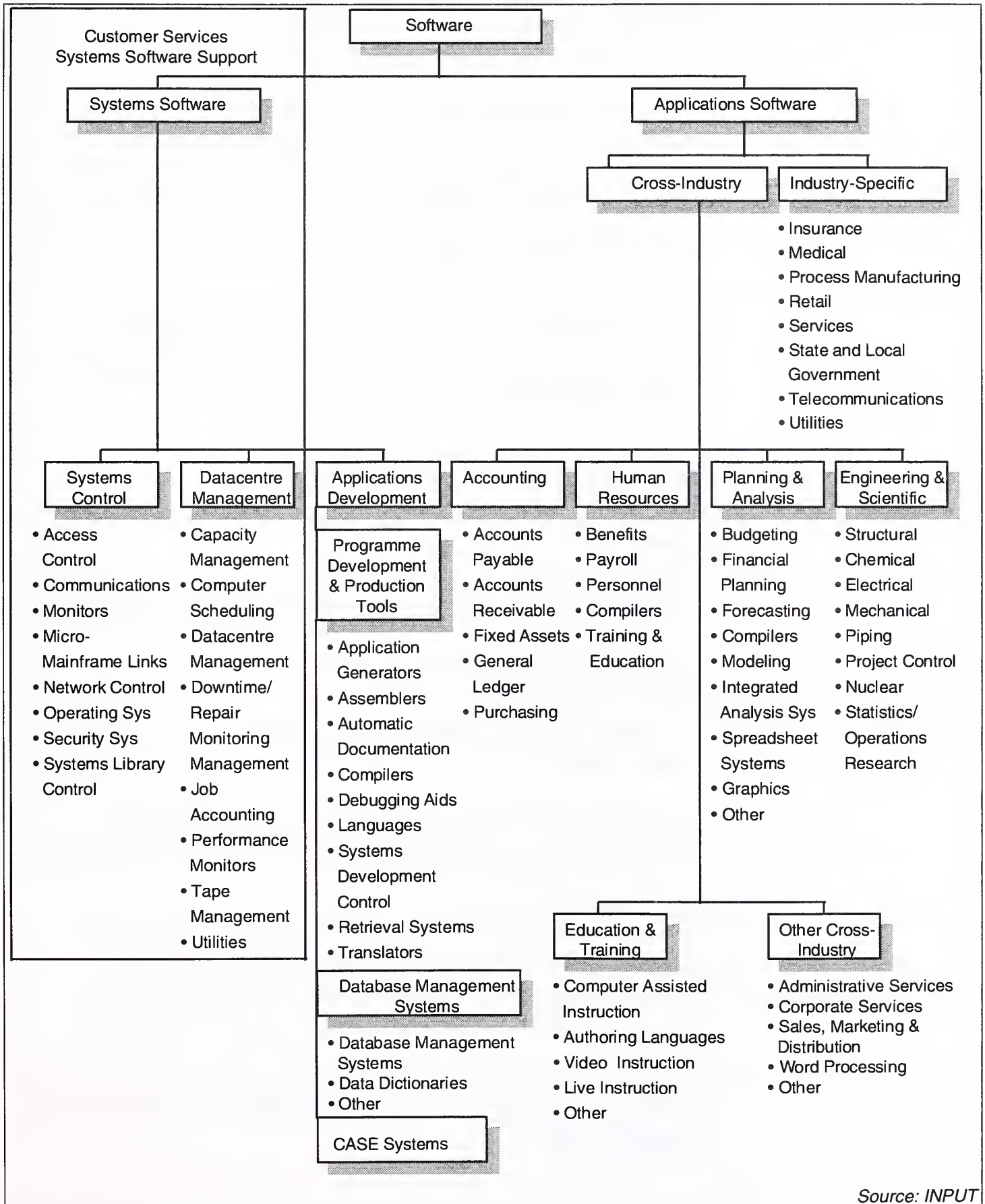


Source: INPUT

Software support activities that are included in the customer services market are those activities related to the support of systems software. Exhibit A-2 illustrates INPUT's definition of the software products market. Aspects of software support included in the customer services market are restricted to those areas highlighted in the exhibit with the rectangular box. They relate to system control and data centre management software products.

Exhibit A-2

Software Products Market Structure



Source: INPUT

B**Customer Services Sectors**

Customer services sectors are defined by INPUT as follows:

- **Equipment maintenance:** the repair or routine preventive maintenance of computer systems hardware or hardware components. Included are associated support activities such as telephone support, problem analysis and remote diagnostics. Contracts may be for one or more years; alternating repairs may be effected on an ad hoc basis.
- **Environmental services** are defined as all planning and implementation services which affect the environments in which computer platforms are expected to run. For these purposes, environment can mean any of the following:
 - The computer room fixtures and fittings
 - Cabling between computers and other devices in a system or network
 - Physical environment, such as: electrical power, air conditioning, water cooling, smoke or fire detection equipments
 - Network attachments
 - Buildings in which computers or network devices or terminals must reside.

Environmental services normally involve the installation, upgrade, repair or de-installation of some piece of equipment, but may be restricted to planning only.

- **Systems software service/support:** software maintenance activities that relate to systems software (not applications software). Included are associated support activities such as telephone support, problem analysis and software diagnostics.
- **Education and training:** all education and training expenditures for IT industry applications are included within the definition of customer services.

- **Professional services:** within the definition of customer services, this sector of the market refers only to those elements of professional services that are concerned with the support of the systems platform or network and its operating environment, including areas such as:
 - Consultancy
 - Network Administration
 - System Software Evaluation
 - Problems Management
 - Project Management
 - Configuration or Capacity Planning.

To distinguish them from environmental services, these professional services are normally restricted to planning, design or management services, without any installation of platform or ancillary equipment. It is important to acknowledge that these services are only part of the more widely defined professional services marketplace.

- **Business continuity services** include a number of service elements related to keeping a business running in the event of a major incident which temporarily puts its IT platform or network completely out of action. They include:
 - Planning for such a contingency
 - Disaster Recovery Services
 - Back-up services for magnetic or optical media
 - Restart services, covering all activities which contribute to reinstating on a permanent basis the platform or network which as suffered the major incident.

These services can be sold together in any combination or as free-standing services.

C

Customer Services Vendors

INPUT's definitions of the three primary categories of customer services vendor are as follows:

- **Equipment vendors** are defined as companies that manufacture computer hardware/equipment and may service equipment manufactured by themselves or other equipment manufacturers
- **Independent maintenance organisations (IMOs)** are defined as companies that service computer equipment and are independent of the manufacturer or agent who sold the equipment
- **Dealers and distributors** are defined as vendors that service equipment that is sold by them, either as an agent of the equipment manufacturer or as a value-added reseller (VAR).

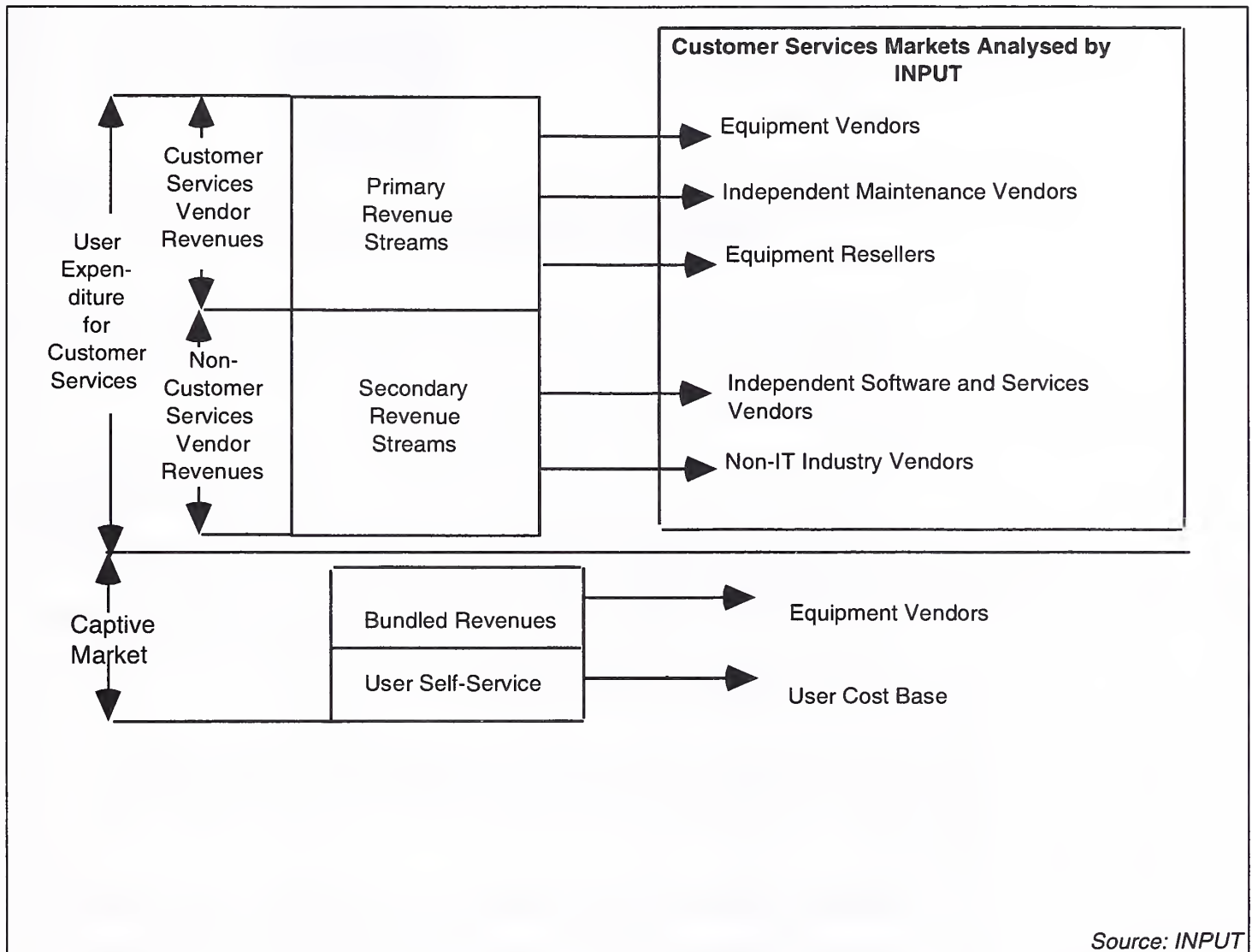
D

Customer Services Revenue Streams

Exhibit A-3 provides a diagrammatic representation of the total customer services market. This model indicates the captive and non-captive revenue components of the total customer services market and the various revenue streams that combine to form the total market.

Exhibit A-3

Customer Services Revenue Streams



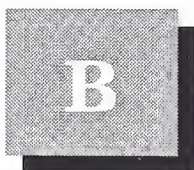
User expenditure for customer services forms that portion of the market where users are provided with vendor services for which they pay separately. This portion of the market sub-divides into two components:

- **Customer services vendor revenues.** This portion of the customer services market refers to vendors for whom customer services revenues are considered to be a primary revenue stream:
 - Equipment Vendors
 - Independent Maintenance Companies
 - The Dealer/Distributor portion of the indirect equipment resellers market.

- **Non-customer services vendor revenues** refer to user expenditure, for customer services, with vendors for whom customer services revenues are not considered to be a primary stream. This portion of the market results from the following activities:
 - The system integration (SI) and turnkey systems segments of the indirect equipment resellers market. In a minority of cases, these vendors provide service and support for the system platform
 - Software and services vendors whose primary source of revenue results from such items as custom software development will sometimes also provide systems support
 - Non-industry vendors such as building/construction companies or specialist product and building services companies that provide environmental services. Provision of these services is a secondary aspect to the vendor's main line of business; for example, a specialist air conditioning company might service many industry sectors, with systems for a whole range of applications besides computer room air-conditioning.

The captive portion of the customer services market relates to the provision of services for which the user does not pay separately. For example:

- Systems software support charges may be bundled as part of the software license fee rather than paid for separately by the user
- Users who wholly or partly provide their own customer services from the use of in-house resources. In this case the charges for services are accrued as an in-house cost and therefore do not result in external expenditure.



Exchange Rates

Exhibit B-1 shows the exchange rates used for all INPUT's European forecasts during 1995.

Exhibit B-1

US Dollar and ECU Exchange Rates: 1995

Country	Currency	US Dollar	ECU
Europe	\$	1	0.815
France	FF	5.34	6.54
Germany	DM	1.55	1.90
United Kingdom	PS	0.639	0.784
Italy	Lira (K)	1.62	1.99
Sweden	Sek	7.43	9.11
Denmark	DK	6.08	7.46
Norway	NK	6.76	8.29
Finland	FM	4.74	5.82
Netherlands	Dfl	1.74	2.13
Belgium	BF	31.8	39.00
Switzerland	SF	1.31	1.60
Austria	Sch	10.9	13.40
Spain	Ptas	131.6	161.40
Ireland	IP	0.647	0.794
Portugal	Esc	159.2	195.20
Greece	Dra	240.6	295.20
Eastern Europe	\$	1	0.815

Source: Financial Times January 1995

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INPUT®

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